

APPENDIX E

Scoping Comments

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Scoping Comment Summary

During October/November 2006, the California Department of Fish and Game (CDFG) received 26 scoping comment cards and letters in reference to the Notice of Preparation for the Shasta River Watershed-wide Permitting Program and the Scott River Watershed-wide Permitting Program. Fourteen of the 26 comment submissions were considered “general” by CDFG, and therefore were considered in preparation of both Environmental Impact Reports (EIRs). There were eight letters specifically addressing concerns in the Scott River watershed, and four letters that applied to the Shasta River watershed.

Scoping Comments that addressed issues in the Scott River watershed were received from the following:

Federal Agencies

United States Army Corps of Engineers

State Agencies

State Clearinghouse Letter – SCH #2006102095

Quartz Valley Indian Reservation

Yurok Tribe

Native American Heritage Commission

Siskiyou County

Organizations

Ad Hoc Committee – Ann Maurice

Cal Trout – Curtis Knight

Klamath Riverkeeper – Regina Chichizola

North Coast Consumer’s Alliance – Ellen Faulkner

Pacific Coast Federation of Fishermen’s Associations – Vivian Helliwell

Individuals

Gary Black

Jack Cowley

Monique Dixon

Margaret Draper

Dean Estep

Don Gutleben

Justin Ly

John and Jennifer Menke

Danielle Quigley



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

REPLY TO

DEC 27 2006

2006 DEC 29 PM 12 24
RECEIVED
DFC - REDDING

Regulatory Branch (1145b)

SUBJECT: File Number 400208 (Shasta River) and 400209 (Scott River)

Mr. Bob Wialiams
California Department of Fish and Game
601 Locust Street
Redding, California 96001

Dear Mr. Williams:

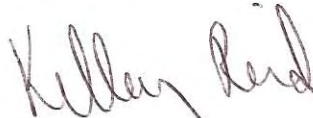
This letter responds to a request for comments on the "Notice of Preparation of a Draft Environmental Report" for establishing watershed wide permitting programs on the Scott and Shasta Rivers. Both the Shasta and Scott Rivers and their tributaries are considered waters of the United States. All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed work appears to be within our jurisdiction and a permit may be required for your project. The Corps has a number of permitting options available. Permits may be in the form of a Regional General Permit issued to your office as the sponsor or Individual Permits issued for each project site. Application for Corps authorization should be made to this office. An application Form is available upon request. The application must include plans showing the location, extent, and character of the proposed activity. You should note, in planning your project, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

Our Nationwide and Regional General Permits have already been issued to authorize certain activities provided specified conditions are met. Your completed application will enable us to confirm that your activity is already authorized. You are advised to refrain from starting your proposed activity until we make a determination that the project is covered by an existing permit. Commencement of work before you receive our notification will be interpreted as a violation of our regulations.

Should you have any questions regarding this matter, please call Michael Shirley of our Regulatory Branch at 707-443-0855. Please address all correspondence to the Regulatory Branch and refer to the File Number at the head of this letter.

Sincerely,

A handwritten signature in dark ink, appearing to read "Kellay Hicks", written over a horizontal line.

Jane M. Hicks
Chief, Regulatory Branch

Copy Furnished:

CA DFG, Redding, CA
CA RWQCB, Redding, CA

County of Siskiyou Planning Department
P.O. Box 1085
Yreka, California 96097



Arnold Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Sean Walsh
Director

Notice of Preparation

October 20, 2006

To: Reviewing Agencies

Re: Scott River Watershed-wide Permitting Program
SCH# 2006102095

Attached for your review and comment is the Notice of Preparation (NOP) for the Scott River Watershed-wide Permitting Program draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

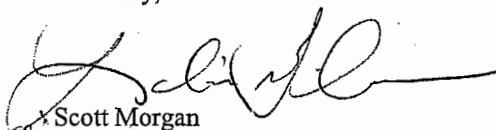
Please direct your comments to:

Bob Williams
Department of Fish and Game, Region 1
601 Locust Street
Redding, CA 96001

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2006102095
Project Title Scott River Watershed-wide Permitting Program
Lead Agency Fish & Game #1

Type NOP Notice of Preparation
Description The project is the Scott River Watershed-Wide Permitting Program. The program is designed to implement key coho salmon (*Oncorhynchus kisutch*) recovery tasks while facilitating compliance by agricultural operators and those implementing coho salmon restoration projects within the California Endangered Species Act and Fish and Game Code section 1602.

Lead Agency Contact

Name Bob Williams
Agency Department of Fish and Game, Region 1
Phone (530) 225-2365 **Fax**
email
Address 601 Locust Street
City Redding **State** CA **Zip** 96001

Project Location

County Siskiyou
City
Region
Cross Streets
Parcel No.

Township	Range	Section	Base
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Proximity to:

Highways
Airports
Railways
Waterways Scott River and tributaries
Schools
Land Use Various

Project Issues Agricultural Land; Archaeologic-Historic; Public Services; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Forestry and Fire Protection; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Health Services; Office of Emergency Services; Native American Heritage Commission; State Lands Commission; Caltrans, District 2; State Water Resources Control Board, Division of Water Quality; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Board, Region 1

Date Received 10/20/2006 **Start of Review** 10/20/2006 **End of Review** 11/20/2006

SCH#

Institution List

County:

Siskiyou

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
Cathleen Hudson
North Coast Region (1)
- ☐ **RWQCB 2**
Environmental Document
Coordinator
San Francisco Bay Region (2)
- ☐ **RWQCB 3**
Central Coast Region (3)
- ☐ **RWQCB 4**
Teresa Rodgers
Los Angeles Region (4)
- ☐ **RWQCB 5S**
Central Valley Region (5)
- ☐ **RWQCB 5F**
Central Valley Region (5)
Fresno Branch Office
- ☐ **RWQCB 5R**
Central Valley Region (5)
Redding Branch Office
- ☐ **RWQCB 6**
Lahontan Region (6)
- ☐ **RWQCB 6V**
Lahontan Region (6)
Victorville Branch Office
- ☐ **RWQCB 7**
Colorado River Basin Region (7)
- ☐ **RWQCB 8**
Santa Ana Region (8)
- ☐ **RWQCB 9**
San Diego Region (9)

☐ Other _____

Last Updated on 04/28/06

- ☐ **Fish & Game Region 3**
Robert Floerke
- ☐ **Fish & Game Region 4**
Julie Vance
- ☐ **Fish & Game Region 5**
Don Chadwick
Habitat Conservation Program
- ☐ **Fish & Game Region 6**
Gabrina Gatchel
Habitat Conservation Program
- ☐ **Fish & Game Region 6 I/M**
Tammy Allen
Inyo/Mono, Habitat Conservation
Program
- ☐ **Dept. of Fish & Game M**
George Isaac
Marine Region
- Other Departments
- ☐ **Food & Agriculture**
Steve Shaffer
Dept. of Food and Agriculture
- ☐ **Dept. of General Services**
Public School Construction
- ☐ **Dept. of General Services**
Robert Sleppy
Environmental Services Section
- ☒ **Dept. of Health Services**
Veronica Malloy
Dept. of Health/Drinking Water
- Independent Commissions/Boards
- ☐ **Delta Protection Commission**
Debby Eddy
- ☒ **Office of Emergency Services**
Dennis Castrillo
- ☐ **Governor's Office of Planning
& Research**
State Clearinghouse
- ☒ **Native American Heritage
Comm.**
Debbie Treadway

- ☐ **Public Utilities Commission**
Ken Lewis
- ☒ **State Lands Commission**
Jean Sarino
- ☐ **Tahoe Regional Planning
Agency (TRPA)**
Cherry Jacques

Business, Trans & Housing

- ☐ **Caltrans - Division of
Aeronautics**
Sandy Hesnard
- ☐ **Caltrans - Planning**
Terri Pencovic
- ☐ **California Highway Patrol**
Shirley Kelly
Office of Special Projects
- ☐ **Housing & Community
Development**
Lisa Nichols
Housing Policy Division

Dept. of Transportation

- ☐ **Caltrans, District 1**
Rex Jackman
- ☒ **Caltrans, District 2**
Marcelino Gonzalez
- ☐ **Caltrans, District 3**
Jeff Pulverman
- ☐ **Caltrans, District 4**
Tim Sable
- ☐ **Caltrans, District 5**
David Murray
- ☐ **Caltrans, District 6**
Marc Bimbaum
- ☐ **Caltrans, District 7**
Cheryl J. Powell

- ☐ **Caltrans, District 8**
Dan Kopulsky
- ☐ **Caltrans, District 9**
Gayle Rosander
- ☐ **Caltrans, District 10**
Tom Dumas
- ☐ **Caltrans, District 11**
Mario Orso
- ☐ **Caltrans, District 12**
Bob Joseph

Cal EPAAir Resources Board

- ☐ **Airport Projects**
Jim Lerner
- ☐ **Transportation Projects**
Ravi Ramalingam
- ☐ **Industrial Projects**
Mike Tollstrup

- ☐ **California Integrated Waste
Management Board**
Sue O'Leary

- ☐ **State Water Resources Control
Board**
Jim Hockenberry
Division of Financial Assistance

- ☒ **State Water Resources Control
Board**
Student Intern, 401 Water Quality
Certification Unit
Division of Water Quality

- ☒ **State Water Resources Control Board**
Steven Herrera
Division of Water Rights

- ☐ **Dept. of Toxic Substances Control**
CEQA Tracking Center

- ☐ **Department of Pesticide Regulation**



QUARTZ VALLEY INDIAN RESERVATION
13601 Quartz Valley Road
Fort Jones, CA 96032
ph: 530-468-5907 fax: 530-468-5908

November 17, 2006

Bob Williams, Staff Environmental Scientist
Conservation Planning
California Department of Fish and Game
Northern California - North Coast Region
601 Locust Street
Redding, California 96001

California Department of Fish and Game,

Please find the enclosed the comments submitted by the Quartz Valley Indian Reservation (QVIR). We would like to thank you for this opportunity to provide comments during the DEIS scoping process on the Shasta and Scott ITP and Environmental Check List.

The Reservation is located in both Scott and Shasta Valley's. The health of the fishery in these two water sheds is critical to the health and survival of the way of life of our native people, within the Shasta and Scott and the entire lower-Klamath basin.

We understand the need to compromise and work together with the agricultural community and their established way of life. However, we feel this document is in no way a compromise of two sides and regret that tribe's have not been involved from the beginning of this process.

We will continue to provide our technical comments in a hope that they are considered when preparing the final EIS. If a true desire to restore the fishery in both the Scott and Shasta Valley's exists, then we would expect a final EIS to include some of the issues we have presented.

Thank you.

Sincerely,

Harold Bennett
Tribal Vice-Chairman
Quartz Valley Indian Reservation

Scott River Scoping Comments

Technical Memorandum

On October 11, 2006, Region 1 of the California Department of Fish and Game (CDFG) issued a Notice of Preparation (NOP) of a Draft Environmental Impact Statement (DEIS) for a Scott River Watershed-Wide Coho Salmon Incidental Take Permitting Program. An Incidental Take Permit (ITP) is required by the California Endangered Species Act (CESA) for any land users who may cause harm to any listed species.

Coho salmon (*Oncorhynchus kisutch*) were found to require protection as a threatened species, under the terms of the federal ESA, throughout their range in northwestern California and southern Oregon, by the National Marine Fisheries Service more than a decade ago (Weitkamp et al., 1995). The California Department of Fish and Game eventually reached a similar conclusion and moved to list coho under the CESA statutes in 2003 (CDFG, 2002). In response to the State's listing, a *Draft Scott Valley Resource Conservation District Master Incidental Take Permit Application* was filed with CDFG in April 2005 (SRCD, 2005).

The comments provided below, draw on both the 2005 *SRCD Draft ITP* and the recently-released *Environmental Check List and Initial Study (Initial Study)* (CDFG, 2006). These documents are intertwined. The *Scott River Watershed Sediment and Temperature Total Maximum Daily Loads* (NCRWQCB, 2006) is also referenced here, along with the comments on that document offered last spring by the Quartz Valley Indian Community (QVIC, 2006). The QVIC document is provided as Appendix A to these scoping comments because it provides excellent background information on the factors that limit salmon populations, including their water quality needs, and recommendations for monitoring and restoring cold water fish populations.

Because neither the *SRCD Draft ITP* nor the CDFG *Initial Study* adequately characterize the status of the coho salmon species in northwestern California; streamflow issues related to that status; the role of groundwater extractions on stream habitat; or anything resembling a best-science approach to coho salmon protection and restoration (see: Bradbury et al., 1994), background discussion on these issues is provided here.

AN OVERVIEW OF CDFG'S INCIDENTAL TAKE PERMITTING PROCESS

A fundamental flaw in CDFG's approach to the proposed permitting of the incidental take of coho salmon in the Scott River watershed is that it will not succeed in protecting coho salmon and it will not, therefore, satisfy CDFG's CESA authority for issuing such a permit in the first place.

The basic authority for these incidental take permits (California Fish and Game Code Section 2081) states, in part, that

(c) No permit may be issued pursuant to subdivision (b) if issuance of the permit would jeopardize the continued existence of the species. The department shall make

this determination based on the best scientific and other information that is reasonably available, and shall include consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities.

The *Initial Study* fails to meet the stated CESA requirements for the use of best available science; it does not properly characterize the true risk of coho salmon extinction; and it does not acknowledge that the continuation of existing land- and water uses in the watershed will, in all likelihood, cause further decline of coho salmon in the Scott River. Because the ITP does not address issues like the excessive diversion of streamflow and the over-extraction of groundwater, flow-related water quality problems in the Scott River will not be resolved and coho salmon will likely continue to decline, or will become extinct altogether. The actions that CDFG would permit will, in fact, jeopardize “the continued existence of the species”.

CDFG’s use of SRCD Draft ITP submission date as the baseline conditions for the application of CEQA may just meet the minimum requirements of CEQA but it fails altogether to comport with the department’s duties under the State and federal endangered species acts and legislative mandates such as the Fisheries Restoration Act of 1985 (CF&G Code Section 2760, et seq.), which contemplates not only the prevention of further salmon population declines in the state, but planning and implementation, by the department, of a doubling of salmon numbers, “primarily through the improvement of stream habitat”.

The preponderance of scientific evidence found in 1995 that Scott River basin coho salmon required the protection of State and federal endangered species acts because dams, land use and water extraction activities had so profoundly changed habitat quality that the species was – and it remains to this day -- on the verge of extinction. Maintaining the Scott River coho salmon population at its current depleted level will most likely only postpone their extinction until they are overcome by genetic drift or stochastic events (Rieman et al., 1993).

The *Initial Study* does not reference the *Scott TMDL* (NCRWQCB, 2006) and shows no indication that literature regarding Scott River restoration have been reviewed (Kier Associates, 1991; 1999; NAS, 2003). Ideally the Scott River watershed-wide ITP would work in conjunction with the TMDL because water quality problems are a major reason for coho salmon decline. Given the present tack of the CDFG ITP process, water quality problems are unlikely to be reversed or their remediation may take so long that it will be too late to restore coho salmon.

Actions taken under the *SRCD Draft ITP* and *Initial Study* focus only on coho salmon, which is not the only Pacific salmon species at risk in the Scott River basin nor the species of greatest economic importance. This single species “tunnel vision” results in a lack of protection under the proposed ITP for steelhead trout (*O. mykiss*) and Chinook salmon (*O. tshawytscha*) and in fact may pose jeopardy for these species as well.

If CDFG moves forward in its current mode and approves a watershed-wide ITP, it is essentially permitting many activities that are in violation of California and federal laws:

- Lack of flow releases below irrigation dams in the Scott River is not legal under CDFG Code Section 5937
- The listing of the Scott River as impaired under the Clean Water Act (NCRWQCB, 2005) recognizes the river's polluted condition; mandates the need for a TMDL water quality recovery plan; and mandates the cooperation of agencies of State government beyond those with primary responsibility for water pollution abatement.

The issuance of a watershed-wide ITP as proposed by CDFG will shield activities in the Scott River watershed which are inimical to coho salmon protection and restoration from effective and necessary legal challenge.

SUMMARY COMMENTS ON THE *SRCD DRAFT ITP APPLICATION*

The *Initial Study* was written in response to the *SRCD Draft ITP* and refers to it, but does not include detailed information from it on specific actions to be taken. What follows is a brief summary of the *SRCD Draft ITP*, but more details on its stipulations are enfolded in a later section reviewing elements of the CDFG *Initial Study*.

The *SRCD Draft ITP* recommends some measures that would likely improve conditions for coho salmon, but in aggregate the actions recommended would cause jeopardy to the species. Problems exist with water rights, State Watermaster service, groundwater pumping, riparian grazing, fish screens, assessment of coho extinction risk, monitoring and data sharing.

The *SRCD Draft ITP* makes it clear that local stream diverters will only strategically contribute water to improve conditions for coho salmon and only when they are 100% compensated for any lost flow or pumping costs incurred. There is no stated goal of restoring perennial surface flows to the river or its tributaries. The actions outlined in the *SRCD Draft ITP* do not provide flows needed for fall Chinook and winter steelhead, let alone accomplish restoration of flows in the Scott River gorge to aid potential recovery of summer steelhead and spring Chinook.

The *SRCD Draft ITP* lacks scientific rigor in several regards:

- 1) It uses coho salmon data to infer population increases that the data do not support,
- 2) It treats recently collected salmon spawning, electrofishing and downstream migrant trapping data as "baseline" conditions, when in fact they present only a recent snap shot,
- 3) It asserts that increases in coho are related to habitat improvements due to previous local efforts, but supplies no data or information to support that claim,
- 4) It makes unsubstantiated statements regarding historic stream conditions that are factually questionable (all valley floor tributaries "naturally" went dry), and
- 5) Raw data to support SRCD report conclusions are not available, which is a requirement for any science-based report or model (Collison et al., 2003).

COHO POPULATION VIABILITY ISSUES AND TARGETS FOR RECOVERY

The *SRCD Draft ITP* states that “CDFG has concluded that the viability of coho salmon runs in the Scott River is uncertain and there is a risk that the proposed activities, without benefit of take avoidance measures, could lead to severe impacts, including possible extirpation of one or more brood years.” It suggests that coho have survived despite farming and ranching practices in the past; therefore, with additional conservation measures under the ITP they will at least persist.

Coho salmon almost all spawn at identical intervals of three years, which leads to somewhat isolated year classes. California Department of Fish and Game downstream migrant trapping records (Chesney, 2001; 2002; Chesney and Yokel, 2003) show only one strong year class of Scott River coho salmon. Figure 1 is from the year 2001 when flows were low and trapping conditions ideal, but only 183 coho juveniles were captured because it coincides with a weak year class. Risk of stock loss for coho is high when there are very weak year classes (Rieman et al., 1993; NMFS, 2001; CDFG, 2002).

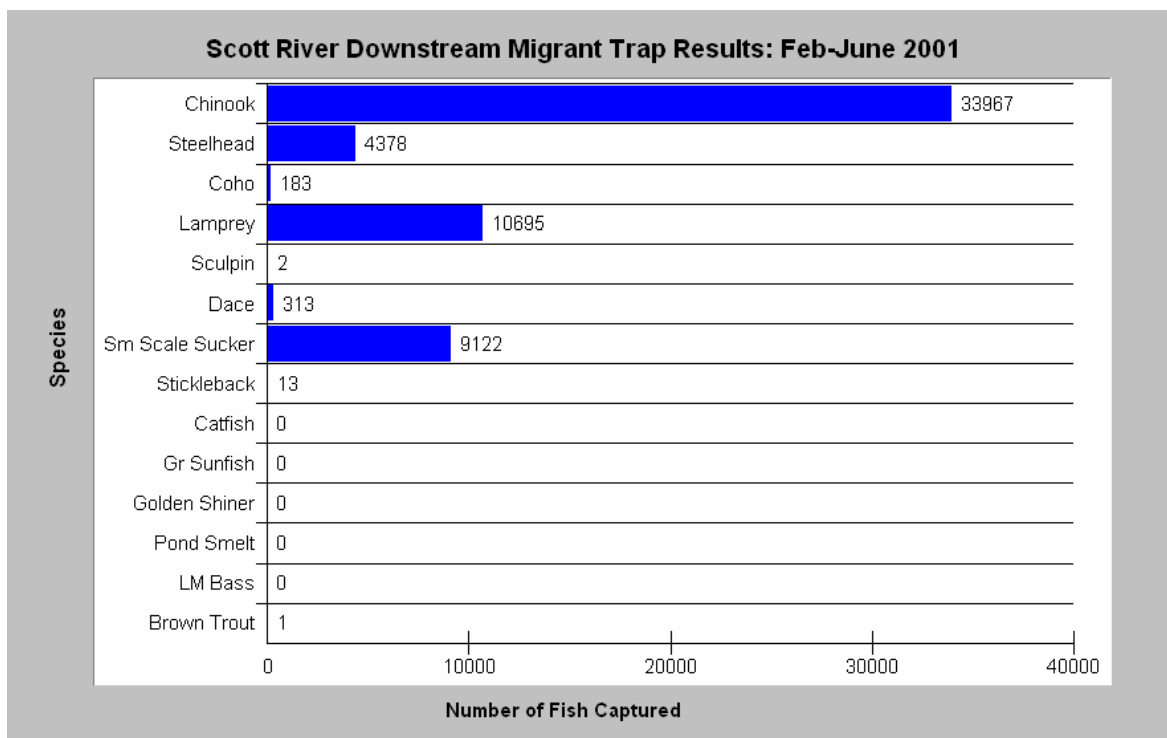


Figure 1. Scott River downstream migrant trapping results from 2001 showing very few coho juveniles. Data from Chesney (2001). Chart from KRIS V 3.0 (TCRCD, 2003).

The *SRCD Draft ITP* defines coho population levels that have been monitored within the last few years as "baseline". While the term baseline may be narrowly correct for conditions at the time of the ITP application under CEQA (see below), baseline usually refers to pre-disturbance conditions in scientific studies. With only one of three year classes at viable population levels, maintaining the current population levels is not acceptable. The DEIS should set a target for annual minimum adult coho population at levels recognized as sufficient for maintaining genetic diversity, which would be at least 500 individuals (Gilpin and

Soule, 1986; Riggs, 1990). The level of returns has in some recent years has exceeded 500, such as 2004-2005 when an estimated 1500 coho returned to the Scott River basin. The challenge is to maintain the strong year class while re-building the two weaker ones, which cannot be done without significant habitat improvement including increased flows.

Recent resurgence of Scott River coho is ascribed to habitat improvements by the SRCD Draft ITP, but may also be associated with improved ocean conditions and wet on-land cycles driven by the Pacific Decadal Oscillation (PDO) cycle (Hare et al., 1999; Collison et al., 2003). Ocean conditions off California, Washington and Oregon switched to more favorable in about 1995 and a shift to unfavorable conditions is likely to occur between 2015 and 2025 (Collison et al, 2003). When ocean conditions become unfavorable and a drier on-land climate returns, freshwater habitat conditions will have to have been improved or risk of Scott River coho extinction will be very high (see Appendix A for more in depth discussion). Consequently, if the CDFG proposed watershed-wide ITP does not increase flows and improve water quality significantly, it will pose jeopardy to the continued existence of Scott River coho.

The *Initial Study* provides no reference to the status or future viability of the Scott River coho salmon population. The DEIS must address this critical issue and include tangible measures for species recovery, including monitoring to support adaptive management. The CDFG DEIS also needs to discuss how a switch of the PDO in 2015-2025 may impact coho salmon and the effect of freshwater habitat quality at that time on their prospects for survival.

The SRCD Draft ITP and Initial Study both target measures for coho salmon only, when Scott River fall Chinook stocks have recently plummeted to an all time low (see Appendix A). As a result, the proposed Scott River watershed-wide coho salmon ITP may pose a risk of jeopardy to Chinook salmon as well (see Biological Resources discussion).

DETAILED COMMENTS ON CDFG'S *INITIAL STUDY*

The CDFG (2006) *Initial Study* for issuance of a Scott River watershed-wide ITP was reviewed and the following comments refer specifically to passages from that document.

Baseline Conditions: The *Initial Study* (p 6) recognizes environmental baseline conditions as those existing at the time the *SRCD Draft ITP* application was filed. Baseline conditions are typically defined in scientific studies as undisturbed conditions such as those that existed prior to human impacts. Numerous tributaries of the mainstem reaches of the Scott River go dry during summer and fall, which is neither their historical condition nor does it comport with a strategy for coho salmon recovery, nor for that of Chinook salmon or steelhead trout. Kier Associates (1991) point out that CDFG (1934; 1974) has battled for decades to prevent the dewatering of the Scott River by agricultural diverters, so the proposed ITP deviates from established CDFG policy. Flows in the Scott River have declined dramatically since the 1970's (see below). The amount of water in late summer and fall has not met needs for maintaining salmonid juvenile rearing habitat in the Scott River canyon on U.S. Forest Service lands as required by the California State Water Resources Control Board (1980) adjudication. Small and large diversion dams in combination also violate CDFG Code 5937:

“The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam.”

Access for Inspection: The *Initial Study* (p 11) states that non-enforcement personnel must be allowed access to all lands covered under the watershed-wide ITP. The delegation of responsibility to the SRCD of reporting infractions and the need for advance notice before even non-enforcement personnel make inspections calls into question CDFG’s willingness to enforce the ITP. This is especially troubling since continuing lack of enforcement of existing law is one of the factors that precipitated the need to list coho salmon.

Avoidance and Minimization of Impacts

Water Management: The *Initial Study* (p. 12) calls only for “compliance with water rights, verification of the quantity of water diverted, and a requirement to install headgates and water measuring devices on diversion structures.” To truly mitigate for agricultural activity impacts on coho salmon and other salmonids, flows would have to be increased substantially. Impacts of Scott River salmonids as a result of over-diversion have been apparent since the 1930’s (Taft and Shapovalov, 1935) and increasingly depleted over the last two decades. The DEIS must include information provided below on the state of Scott River flows and acknowledge the link between flow depletion and water pollution (see Appendix A).

Ground water pumping in the Scott River valley has been recognized as depleting flows because of interconnections between surface and ground water (Mack, 1958; Kier Associates, 1991; CSWRCB, 1980). Despite the fact that the SWRCB recognized many reaches of the Scott River to be fully allocated, ground water wells have continued to be installed. California Department of Water Resources (CDWR) well log data (Figure 2) show that the highest number of wells were installed from 1971-1980, but that installations decreased between 1981 and 1990. Prolonged drought caused an increase in well installations in the 1990’s, but continued at a lower level after 2000. CDWR estimates their record may be 30-50% low as a result of under-reporting. Individual well logs show a decrease in minimum levels consistent with draw down of ground water reserves through pumping (see Appendix A).

Data from the USGS flow gauge at Fort Jones show a substantial decrease in surface flows after ground water pumps began to increase in the 1970’s. Figure 3 shows the number of days by water year that average daily Scott River fell below 20 cubic feet per second. The flow of 20 cfs is significant because it is the amount of water legally required under the *Scott River Adjudication* (CSWRCB, 1980) for fish and aquatic ecosystem function on USFS lands in the Scott River gorge (Figure 4). The DWR Watermaster service, however, has never enforced adjudication on mainstem Scott River reaches. The flow data show that even in extremely dry years flow never fell below this threshold prior to 1975, but that now flows frequently fall lower even in moderate or wet years. Low flows contribute to increases in water temperature (NAS, 2003); therefore, they not only reduce the volume of coho juvenile rearing habitat but also the habitat suitability. This area, the Scott River gorge, was also historically used by adult summer steelhead and spring Chinook.

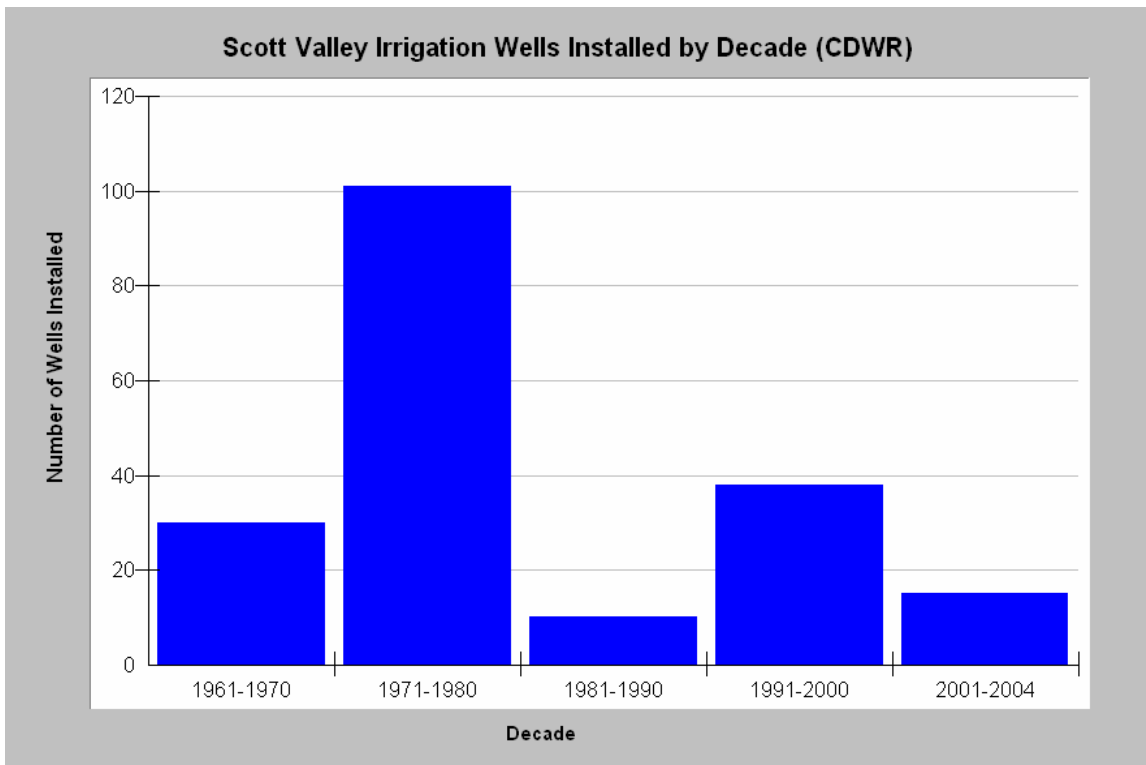


Figure 2. California Department of Water Resources agricultural irrigation wells installed from 1960-2004.

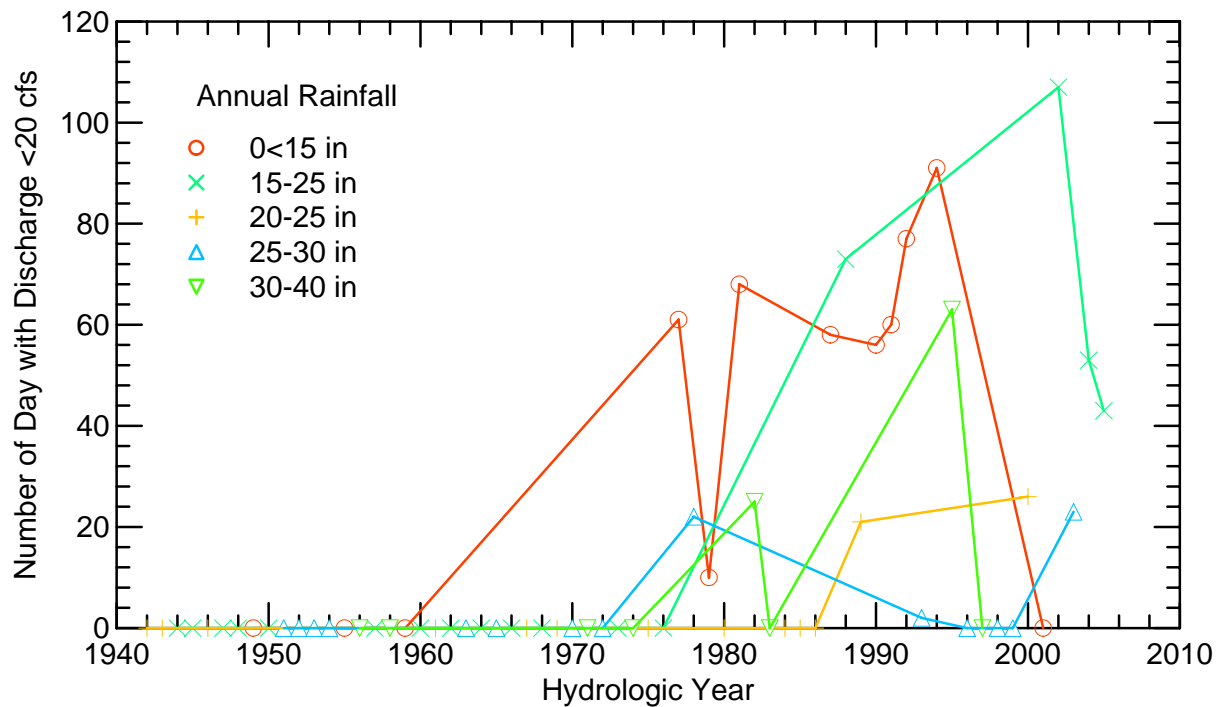


Figure 3. This chart shows the number of days that the Scott River fell below 20 cfs at the USGS gauge below Ft Jones with years with similar annual rainfall grouped together.



Figure 5. Scott River in canyon reach on USFS lands in 2002 showing very depleted flows and very poor fish habitat. Copyrighted photo used courtesy of Michael Hentz.

NAS (2003) gave the following assessment of adequacy of flows for fish in the Scott River: “During the adjudication process, the state and federal governments both failed to negotiate successfully for water that would favor robust populations of fish. There are now no adjudicated rights for fish upstream of the USGS gage in Fort Jones. Below the Fort Jones gage, the U.S. Forest Service (USFS) was allotted flow of 30 cfs during August and September, 40 cfs during October, and 200 cfs from November through March to protect fish. With no Watermaster service, USFS, a junior appropriator, commonly does not receive its adjudicated flows during late summer and fall. Table 1 shows the amount of water required by date at the USGS gauge and Figure 6 shows Scott River flow data from the summer and fall of 2002. Flows fell below minimums required under the adjudication in late July and remained below legal levels until rains began in November.

Table 1. Scott River Adjudication instream flow allotment for U.S. Forest Service needs for instream flow in Scott River canyon (CDWR, 1980 as cited in Kier Assoc., 1991).

Period	Flow Requirement in Cubic Feet per Second
November – March	200 cfs
April - June 15	150 cfs
June 16 - June 30	100 cfs
July 1 - July 15	60 cfs
July 16 - July 31	40 cfs
August - September	30 cfs
October	40 cfs

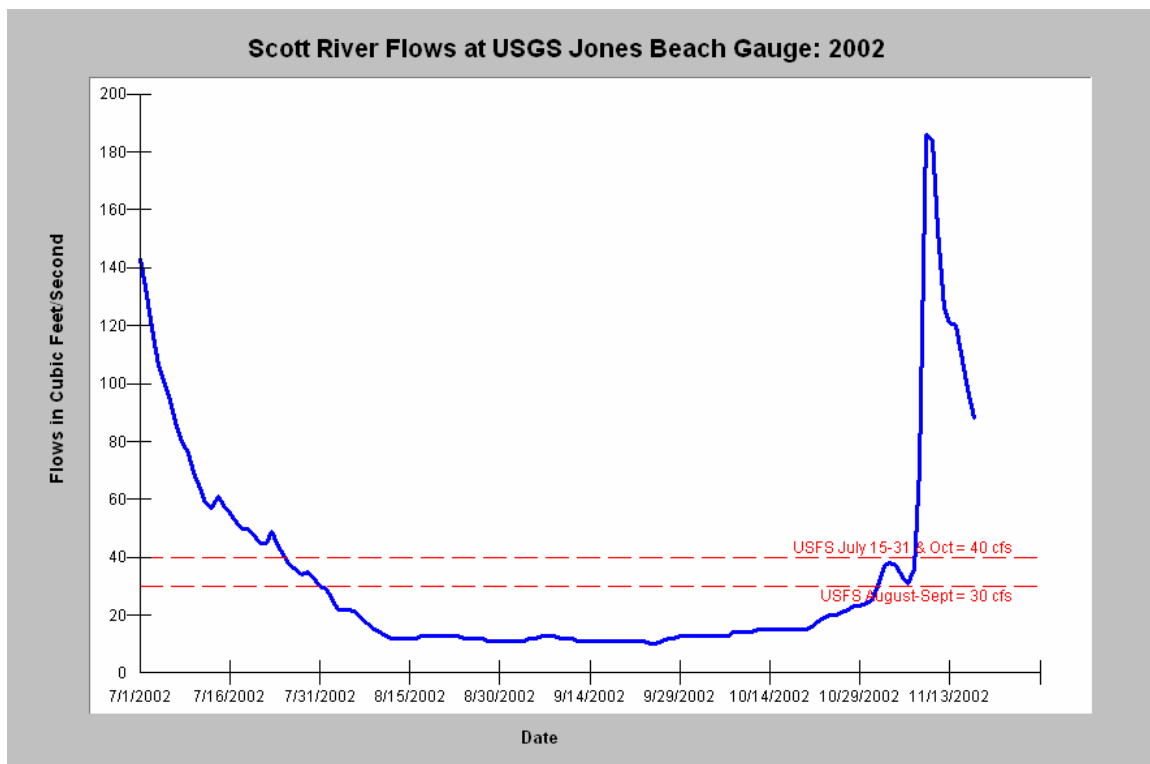


Figure 6. USGS Scott River flow gauge data from July-November 2002 show that minimum flow levels under the Scott River Adjudication were not met from late July to November.

Fish Screens/Fish Passage: The *Initial Study* (p 12) calls for screening of all agricultural water diversions and for remediation of fish passage problems at diversions, which are positive and necessary steps. All screens built since 1972 require that land owners should have them screened at their own expense (Kier Associates, 1991). Passage problems for other species of juvenile salmonids associated with de-watering of tributaries such as Shackelford Creek (Figure 7), Etna Creek and the mainstem Scott River (Figure 8) after coho salmon juvenile out migration have been mitigated since the 50's by CDFG rescue operations which have never been proven effective.

Livestock and Vehicle Crossing: Driving livestock or vehicles through stream beds would be prohibited from October 15-May 15 unless approved by CDFG. This ignores potential fall Chinook salmon spawning that can begin in early October if rains occur.



Figure 7. Shackleford Creek running dry in mid-summer 2002. Copyrighted photo courtesy of Michael Hentz.

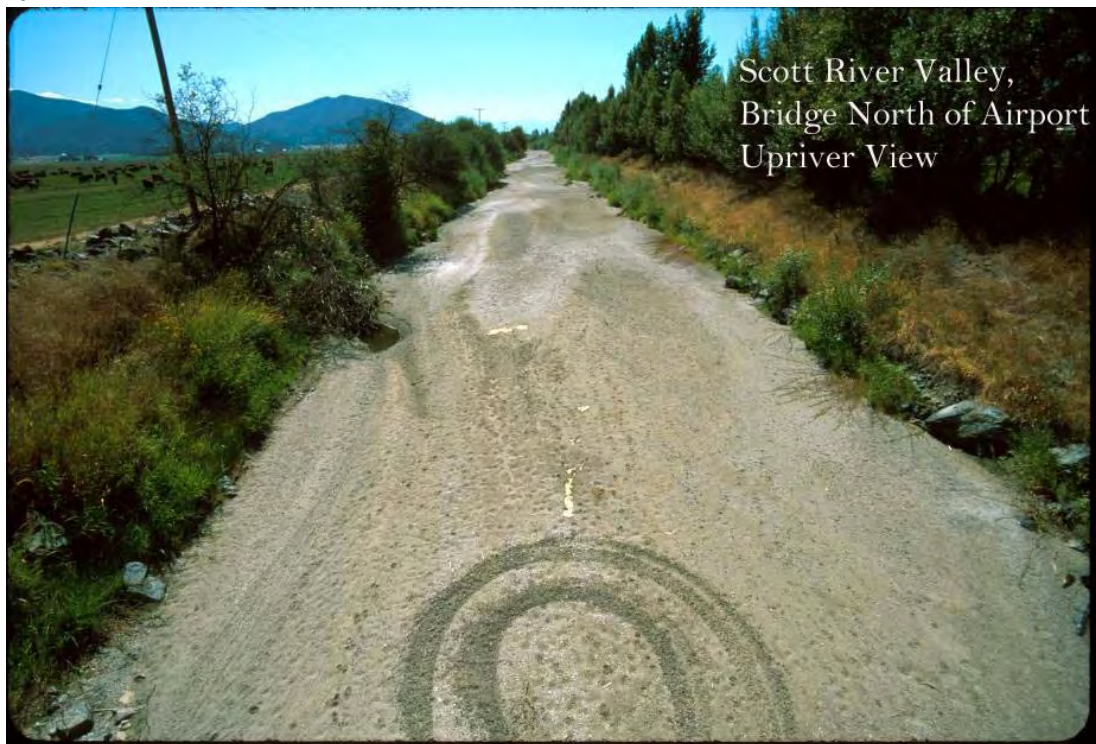


Figure 8. This photo shows the dry bed of the Scott River in a reach near the airport looking upstream. Copyrighted photo used with permission of Michael Hentz. 2002.

Riparian Restoration: Although the *Initial Study* calls for restoring riparian areas and excluding cattle by constructing fences, the riparian buffer width in *SRCD Draft ITP* is not specified. If the distance from stream banks is too small, riparian functions, such as nutrient and thermal buffer capacity may be insufficient to protect and improve water quality. Poole and Berman (2001) noted the influence of riparian width on water temperature, with wider buffer strips more able to create cooler ambient air temperature over the stream and higher relative humidity. Bartholow (1989) showed that mean daily water temperature was most influenced in Western streams by air temperature over the stream, secondarily by relative humidity, with shade ranking third in influence.

The Scott ITP states that grazing in streambeds would continue, but that CDFG and the SRCD would put together plans for grazing to mitigate for any harm to coho. There are serious questions as to whether CDFG has the expertise and staff levels to participate in formulation of such plans and their enforcement. A permanent and effective solution to the problems of grazing in stream beds and the riparian zone of the Scott River and its tributaries would be easement acquisitions, which are not mentioned in the *Initial Study*.

Gravel “Push Up” Dams: The *Initial Study* (p 12) calls for a transition from building temporary gravel dams to use of pumps in most cases, which is a satisfactory approach.

Bank Stabilization: The *Initial Study* states that CDFG would require that all permittees under the watershed-wide ITP use living plant materials as part of bank stabilization, which is called bioengineering (CDFG, 2005). This is an ideal approach to preventing soil loss at the same time as fish habitat is maintained or improved.

Tailwater Recovery: The *Initial Study* calls for prioritizing agricultural return flows would be captured to decrease thermal and nutrient pollution. While this measure is commendable, implementation even for priority sites could be delayed for up to ten years.

Maintain Seasonal Connectivity for Tributaries: Because both French Creek and Shackleford Creek are known to harbor coho salmon, flow connection to the mainstem Scott River will be required before June 15. This action is insufficient to meet CDFG Code 5937 and will not remediate problems for steelhead trout, which are also part of CDFG’s trust responsibility.

MITIGATION OBLIGATIONS OF THE SRCD UNDER THE ITP

Scott River Water Bank: The *Initial Study* (p 14) would establish a very bad precedent of paying farmers and ranchers to leave water in the Scott River and its tributaries during critical periods for coho salmon. Public trust protection is required under California water law and the Fish and Game Code; consequently land and water users are obligated to protect common property resources, such as native fish species. Enforcement action is needed if sufficient stream flows to protect public trust are not provided. Ironically, the envisioned water purchases or leases to benefit coho would likely not be sufficient to restore Chinook and steelhead. Thus, future negotiations and payments would be needed to improve flows for those species.

Retirement of some water rights through purchase might be a viable strategy, but only if adjudication were revisited and a mechanism put in place to prevent further extraction by downstream riparian land owners. The *Initial Study* contemplates the use of Water Code 1707 for getting water dedicated for instream flows, but there is no discussion of tangible measures to acquire such rights or how they would be enforced.

Improve Instream Flows Through Increased Efficiency of Water Use: The call for improving flows and efficiency of water use in the *SRCD Draft ITP* and the *Initial Study* are both positive steps. As noted above, flow increases would be geared only to coho salmon protection and would not likely benefit Chinook salmon and steelhead. The lack of enforcement from the DWR Watermaster (Kier Assoc., 1991) and/or the privatization of Watermaster services (SRCD, 2005) both call into question whether improvements of efficiency in water use would not be negated by re-extraction by downstream riparian water rights holders. Although the *Initial Study* references California Water Code 1707 that would allow dedication of water to instream flows for fish, insufficient detail is provided as to whether these measures would be voluntary or mandatory.

Sugar Creek Flows: The *Initial Study* (p 14) stipulates that 6 cfs of water rights will be dedicated to instream flows within one year after the ITP's implementation. This is very good, but there is not detail on how diversion by downstream riparian land owners will be avoided.

Strategy for Dry and Critically Dry Years: According to the *Initial Study* (p 15), a strategy for dry and critically dry years must be identified within one year of ITP approval. The proposed solution to maintain flows in dry and critically dry years is to increase pumping of ground water with payment from the Water Trust for pumping costs. Ground water extraction in the Scott River basin is already depleting surface flows; therefore, this strategy is unlikely to succeed. The NRCS office in Yreka has recently subsidized water pumps for farmers and ranchers in the Scott River under the rationale that they would become less reliant on diverting stream flows. What has happened instead is that stream flows have been reduced and some downstream water users have lost their supply.

Coordinating Diversions: Scott River flows may vary widely within any given day when irrigation is taking place, which may lead to short-term but critical low flow periods that do not show up in average daily flow summaries from USGS. The *Initial Study* calls for coordination of diversions through a Diversion Ramp-Up Management Plan. This is very good and much needed.

Off-stream Stock Water Development: The *Initial Study* (p 15) requires that at least two additional off-stream stock water systems be installed per year under during the term of the watershed-wide ITP. The specific target for decreasing the need for stock water from surface water diversions is migration of adult coho and ignores critical Chinook salmon needs for additional flow for passage and spawning throughout the month of October (see Attachment A).

Spawning Gravel Enhancement: Gravel enhancement in key reaches for coho spawning

is recommended in the *Initial Study* (p 16) but is not a prudent activity in the Scott River watershed. If anything, the river is over-supplied because of increased sediment yield from uplands (NCRWQCB, 2005) and the problem of maintaining appropriate stream substrate is more related to preventing cumulative watershed effects (see Appendix A). Increased peak flows associated with rain-on-snow events can increase bed shear stress and lead to an increase in the average particle size of the stream bed (Montgomery and Buffington, 1993). Watershed disturbance can also lead to an increase in fine sediment and a median particle size that is well below optimal for spawning (Knopp, 1993). The *Initial Study* and *SRCD Draft ITP* both completely ignore upland management, cumulative effects risk, potential impacts to stream channels, agricultural land, and coho salmon. This lack of integration increases the risk that conservation activities performed as part of the ITP could be confounded.

Habitat Restoration Structures: The *Initial Study* calls for installation of habitat improvement structures in reaches of the Scott River used by coho salmon. Placement of large wood debris (LWD) in upper tributary reaches may be necessary because recruitment of LWD has been decreased by logging. Frissell and Nawa (1992) point out that the incidence of failure of instream structures can be very high in streams with steep gradient and/or high peak discharge. Many habitat restoration structures in Klamath National Forest streams, including some within the Scott River watershed, were buried or blown out by the January 1997 storm (de la Fuente and Elder, 1998). Extensive watershed disturbance from logging and road building, especially in the transient snow zone, increases risk of structure failures (see Appendix A). Hence, any structures installed may have only short-term value, and resources would be better spent on other activities.

Large Diversions Identified as Barriers: The *Initial Study* (p 17) specifies that two major, long-standing fish passage problems at large scale diversions and targets them for improvement and ladder installation. The Scott Valley Irrigation District (SVID) Diversion will require a ladder to pass juvenile and adult coho within one year of the ITP approval. The Farmers Ditch is the second largest irrigation system in the Scott Valley and would be converted from a gravel “push up” dam to a vortex boulder weir. The passage in the Initial Study related to Farmers Ditch states that “The weir will be required to pass fish as long as flow is present.”

East Fork Scott River Fish Passage: The Initial Study notes that the EF Scott River harbors coho salmon in three of its headwater tributaries, but recommends establishing passage in only two out of three. All three identified tributaries are critical coho salmon habitat and it would be far preferable to acquire easements or strategic parcels to allow them all equal protection.

MONITORING AND ADAPTIVE MANAGEMENT UNDER THE ITP

The responsibility for monitoring under the Scott River watershed-wide ITP would fall to the SRCD and DWR, with reporting requirements to CDFG. Provision of raw data to CDFG is required, which is a necessity in any science-based activity (Collison et al., 2003). The DEIS prepared by CDFG should also include stipulations and descriptions of mechanisms for sharing of raw data with the NCRWQCB, Tribes and the public. While both implementation

and effectiveness monitoring are called for, no specific monitoring activities are defined. In order to allow trend monitoring and adaptive management, the DEIS needs to require collection of water quality and fisheries data at the same locations and using the same methods as those employed heretofore. Study design for monitoring under the ITP should not be delegated to SRCD staff nor should specific monitoring requirements be deferred for later action.

The delegation of coho monitoring by CDFG to the SRCD is a cause of concern not only because of data sequestration issues, but also because SRCD staff may not be as well trained as CDFG personnel, increasing the risk of take of coho salmon juveniles. The suggestion that coho caught in downstream migrant traps might be transported back upstream is well-intentioned but a bad idea because it would likely exacerbate competition problems and decrease coho salmon production in tributaries where such transfer activities are carried out.

POTENTIAL AIR QUALITY IMPACTS OF THE ITP

The Initial Study (p 26-35) discussion of air quality and potential impacts of ITP related activities covers nine pages. It correctly concludes that restoration will have no significant impact. The use of such “boiler plate” Environmental Check List produces dozens of pages of unnecessary narrative on similar subjects.

BIOLOGICAL RESOURCES AND IMPACTS OF ITP IMPLEMENTATION

CDFG recognizes that the Scott River watershed-wide ITP will have potential impacts on other species. Discussions above note that the *Initial Study* considers validating flow levels that target coho only and could incidentally harm Chinook salmon and steelhead, if approved. Other discussions note that riparian bird species could be temporarily displaced by riparian restoration activities. As discussed above, the true impact of continuing today’s agricultural practices under the ITP on coho salmon is unaddressed in this section because of the *Initial Study’s* focus only on environmental effects of implementation of the ITP itself. The DEIS needs to discuss how maintaining current diversion practices with only minor changes for coho will avoid the risk of jeopardy to Scott River Chinook salmon and steelhead populations as discussed above. See Appendix A for more discussion on fall Chinook stock status.

GEOLOGIC HAZARDS AND ITP IMPLEMENTATION

This section in the *Initial Study* (p 39-47) provides some very interesting information on the geology of the Scott River basin, but is otherwise a digression from the subject at hand. One conclusion drawn is that “the project will not likely increase the potential for an eruption of Mt Shasta” or to increase earthquake risk. Really.

CULTURAL RESOURCES

The section on cultural resources in the Initial Study (p 39) only considers the narrowly defined CEQA definition. The Klamath River basin is unique in that it maintains several indigenous Indian Tribes that still reside in their ancestral territory. The DEIS needs to consider impacts to today’s Native Americans as a cultural consideration, because actions in

the Scott River basin can impact fisheries resources upon which Tribes rely. This is similar to the Klamath Hydroelectric Project impacts, where Tribes are affected by operation although they may be downstream of the immediate project area (Resighini Rancheria, 2005).

POTENTIAL FOR RELEASE OF HAZARDOUS MATERIALS DURING ITP IMPLEMENTATION

The *Initial Study* (p 47-52) concludes after lengthy discussions that the implementation of the Scott River watershed-wide ITP poses minimal risk of a release of hazardous materials into the environment. Possible “take” through exposure of coho salmon to hazardous materials such as pesticides or herbicides associated with normal agricultural operations is not discussed anywhere.

HYDROLOGIC AND WATER QUALITY IMPACTS OF ITP IMPLEMENTATION

Once again, the emphasis of the *Initial Study* on ITP implementation instead of on impacts to coho salmon makes lengthy discussion of hydrologic and water quality impacts (p 54-77) of limited value. The hydrologic conditions of the Scott River basin are well outside the range of normal variability due to intensive land use management and increase the risk of flood damage to coho salmon (see Appendix A). The DEIS needs to discuss how watershed condition and cumulative effects can affect success of ITP implementation.

In order to improve water temperature for coho salmon and meet the requirement for cold water fish as a beneficial use under the Clean Water Act, stream flows must be improved (Appendix A). Other potential water quality problems that could be associated with normal agricultural operations are ignored by the Initial Study. Figure 9 displays the pounds of pesticides and herbicides used in the Scott River watershed between 1990- 2004.

Patterns of use of pesticides indicate that there are more applied in riparian zones or parcels nearer streams than in uplands. Ewing (1999) points out that many pesticides and herbicides can be very harmful to salmonids and that they may be responsible for population declines across the Pacific Northwest. He points out that many commonly used herbicides that are highly volatile in the atmosphere may percolate into ground water where they may persist for decades. Groundwater feeding streams may then re-introduce pesticides that have been in solution at a later date negatively affecting salmonids and other species. The CDFG DEIS needs to address the use of herbicides and pesticides and their potential affects and make their use a covered activity under the ITP. A list of pesticides determined as harmful to salmonids was released by EPA in July of 2006. According to the CA Pesticide Use Reporting Database, the following “salmon harmful” pesticides are being used in the Scott River mainstem and Shackleford Creek tributary: trifluralin, diuron, and multiple 2, 4-D compounds.

To meet with any success, the DEIS needs to coordinate actions with those recommended in the Scott River TMDL (NCRWQCB, 2005) and share responsibility and authority for oversight of Scott River water pollution abatement and restoration of cold water fisheries resources. It also needs to honestly address the issue of how flow affects water quality.

NEEDED ACTIONS TO RESTORE SCOTT RIVER ECOSYSTEM AND COHO SALMON

The National Academy of Sciences (2003) characterizes the prospects for Scott River restoration as follows:

“Despite widespread decline in suitability of habitat, the Scott River retains high potential for becoming once again a major producer of anadromous fishes, especially coho salmon. The lower reaches of the tributaries on the west side of the basin, and the south and east forks, are still used extensively by coho and steelhead despite considerable degradation of the habitat. In addition to continuing efforts to reduce sedimentation and restore riparian vegetation cover in the streams, the key to restoring coho and other salmonids is to improve access of fish to the upper basin tributaries and to enhance coldwater flows.”

Rieman et al. (1993) in *Consideration of Extinction Risks for Salmonids* give council on how to best restore salmonid stocks to decrease extinction risk:

“Maintaining strong populations in the best possible habitats throughout the landscape and preserving the ecological processes characteristic of metapopulations are the best hedges against extinction.”

The DEIS must discuss the prospects for coho salmon recovery in the Klamath River basin overall and the role that the Scott River population may play.

Bradbury et al. (1996) also recognize that the most important step in restoring Pacific salmon populations is to protect refugia. In order to protect and restore coho salmon, there needs to be immediate protection of riparian zones and headwater areas of streams with current coho salmon production (i.e. Shackelford, French, Sugar, EF Scott River). CDFG personnel overseeing timber harvest applications should make this a priority.

Instead of narrow cattle exclusion zones, CDFG should work together with the agricultural community, SWRCB, NRCS and non-governmental organizations like the Nature Conservancy to acquire riparian property or easements to increase nutrient and temperature buffer capacity, increase large wood recruitment, decrease near-stream pesticide use and limit sediment contributions from bank erosion. Riparian gallery forests also trap sediment and large wood, keeping them from being deposited and creating a nuisance on farm and ranch land during storms. Land owners would receive compensation for lost agricultural production and establish natural protection mechanisms for the rest of their land from future flood damage. As soil in riparian zones builds up over time, the hydraulic energy of the Scott River will be more focused and capable of transporting excess sediment and scouring deeper pools.

The SRCD Draft ITP claims that previous restoration activities in the Scott River watershed are responsible for increased coho salmon returns yet there are no monitoring data to support that contention. The ITP will rely heavily on funding from the Natural Resources Conservation Service (NRCS) from the EQIP program. NRCS policy is to not publicly disclose who receives funds, or anything about the project, without the express written permission of the landowner. This bar to transparency hampers adaptive management and

makes it more likely that money will be spent on things that improve the economics of farming, but fall short with regard to benefits for fish. The DEIS needs to stipulate that the location of restoration investments from any public agency be made public and that effectiveness monitoring related to the activity be allowed.

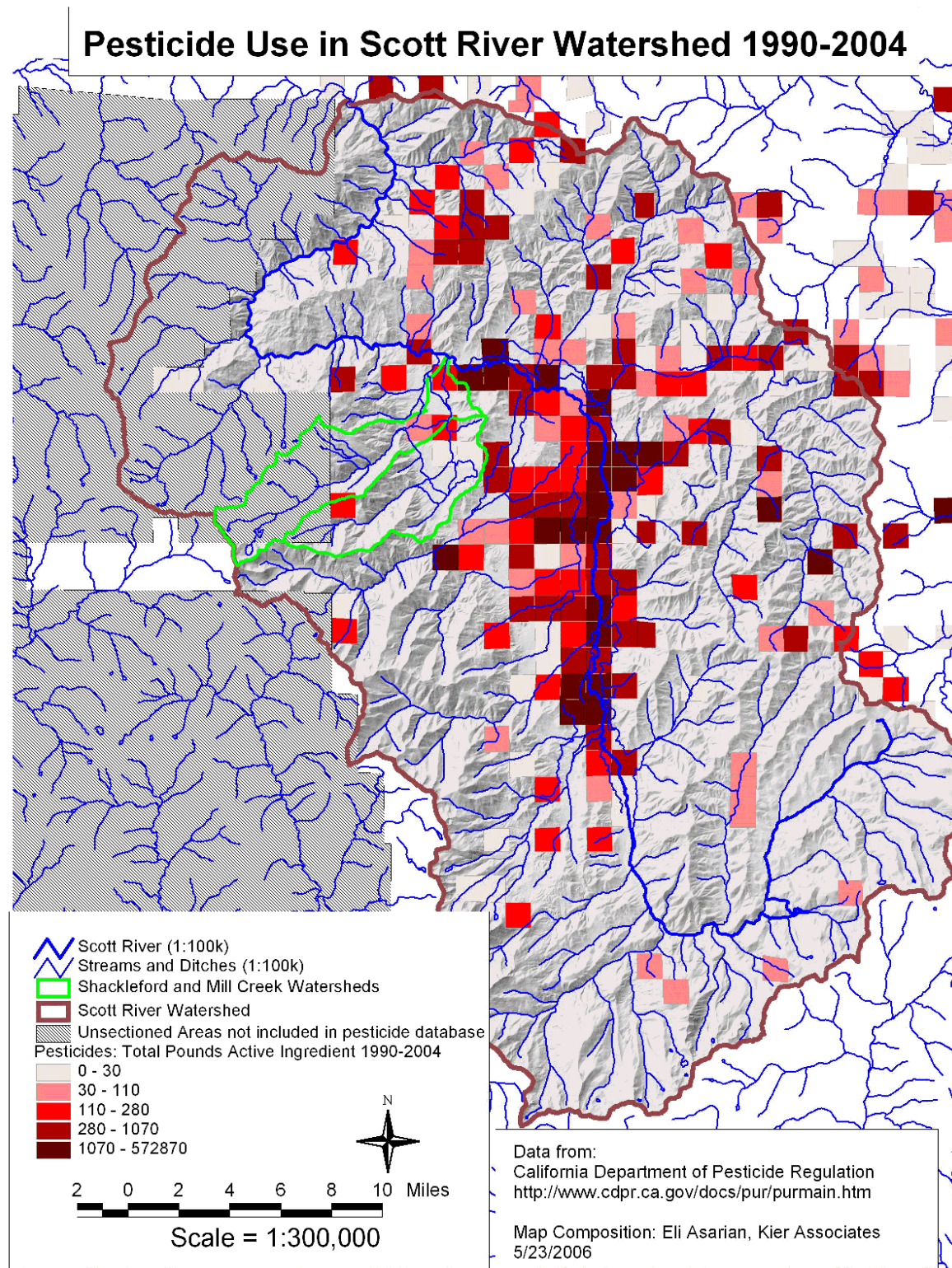


Figure 9. This map shows the total number of pounds of pesticides and herbicides used in the Scott River Valley from 1990-2004. Data from the California Pesticide Use Reporting Database.

NAS (2003) noted that there was considerable activity in the Scott River basin to restore salmon and steelhead, but “the groups have not attempted to resolve the most important but intractable issue: increasing the amounts of cold water entering the tributaries and the main stem.” The current approach to the Scott River ITP does not resolve the flow issue in that it avoids discussion of ground water, fails to restore surface flows to mainstem reaches and tributaries and would continue to provide less water than needed for upstream passage and distribution for fall Chinook salmon.

CONCLUSION

CDFG should consider taking a more global approach to Scott River coho salmon conservation and recovery that would benefit all Pacific salmon species and fully remediate the Scott River basin’s water quality problems. The current approach of trying to mitigate current impacts, while maintaining the existing agricultural and water use paradigm will not likely prevent jeopardy of coho salmon under the proposed ITP as required under CESA.

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November 2, 2005

Catherine Kuhlman, Executive Officer
North Coast Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Dear Ms. Kuhlman,

The Quartz Valley Indian Community of Quartz Valley Indian Reservation (QVIR), with the assistance of our consultants Kier Associates, have reviewed the public draft version of the North Coast Regional Water Quality Control Board's (RWB) Staff Report for the *Action Plan for the Scott River Watershed Sediment and Temperature Total Maximum Daily Loads* (Scott TMDL). As stated in previous comments, the Tribe hopes that the Scott TMDL will result in measurable and timely improvements in the water quality of the Scott River watershed. Please realize that QVIR is the only federally recognized, sovereign tribal government in the Scott Valley. The consideration that the Board gives to our comments should be representative of this fact.

We appreciate the efforts of your staff in the creation of this document and have worked with them to support the development of the Scott TMDL. With the assistance of our consultants, we have collaborated and shared data to assist in this process. The Board and its Staff should be well aware of QVIR's position on the Scott River TMDL. The Tribe has submitted past comments both verbally and in writing to the Board and Staff. Additionally, my staff and consultants have participated in the Scott River TMDL Technical Advisory Group. Regardless, please find attached the official comments of the Quartz Valley Indian Reservation regarding the Scott River TMDL and Implementation Plan.

The QVIR supports the concept of the TMDL. The Tribe would like to see the Scott River Watershed restored to historical healthy and sustainable conditions. Although we do have some remaining concerns with the document and question some of the implementation approaches, we feel overall that the Scott TMDL is a good place to begin with action towards restoring the historic water quality of the Scott River Watershed.

As stated previously, the Tribe supports a Scott Valley Groundwater Study. We question the sustainability of the current method of unlimited and unregulated groundwater extraction. The Tribe agrees with the TMDLs acknowledgement of the link between ground and surface water and was pleased to see the connection recognized by the Board. However, we

question the ability of Siskiyou County to adequately conduct the study based on limited funding and technical capabilities. Agencies such as the Department of Water Resources and United States Geological Survey are better equipped and experienced to undertake a study of this magnitude and nature. We request that QVIR be intimately involved in the development and implementation of the groundwater study. Additionally, all data and information used and produced in this study should be transparent and publicly accessible.

We understand the Regional Board has limited staff and funding, therefore we would like to provide assistance by being involved in the implementation of the TMDL and working on a government to government basis with monitoring and restoration. Additionally, the Tribe would like to be a party in the suggested Memorandums of Understanding between federal agencies and the Regional Board.

I would like to stress the Tribe's sentiment that the state of the Scott Watershed is in peril and needs immediate attention and action. The implementation schedule is not timely enough to protect the watershed in the face of climatic changes, future development, and increased land use. My people have seen the creeks and rivers of Scott Valley dry up and become seasonal waters. We have seen populations of coho, Chinook, steelhead, and lamprey severely decline in the Scott Watershed. To us, water is life. We are concerned about the future of our lives and call upon the North Coast and State Water Boards to protect and heal this watershed.

Attached, you will find technical comments and recommendations. Please contact myself or my environmental staff at 530-468-5907 for further information or clarification on the issues discussed.

Thank you,

Harold Bennett
Vice Chairman

Cc: Beverly Wasson, Chairperson, North Coast Regional Water Quality Control Board
John Corbett, Vice-Chair, North Coast Regional Water Quality Control Board
Dr. Ranjit Gill, North Coast Regional Water Quality Control Board
David Leland, North Coast Regional Water Quality Control Board
Bryan McFadin, North Coast Regional Water Quality Control Board
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Art Baggett Jr., State Water Resources Control Board
Adrian Perez, State Water Resources Control Board
Tim Wilhite, United States Environmental Protection Agency
Janis Gomes, United States Environmental Protection Agency
Gail Louis, United States Environmental Protection Agency

Summary of Comments

The public draft Scott TMDL reflects a lot of hard work by the NCRWQCB staff and its consultants. The maps provided are useful, the Guidance for Development of Erosion Control Plans (Appendix C) is exhaustive, and the narrative concerning the processes which impact sediment and temperature conditions is revealing. The recognition of the relationship between water extraction and stream temperatures is laudable.

There are still critical deficiencies in the Scott TMDL technical analysis and implementation plan that are likely to frustrate the success of temperature and sediment pollution abatement efforts and the restoration of coho salmon and other at-risk Pacific salmon species.

Technical analysis:

- The failure to quantify the extent of important land uses that impact water quality, such as timber harvest, road densities, near-stream roads, and road-stream crossings.
- The failure to use all available tools to identify and manage risks to water quality. Use of the readily-available SHALSTAB shallow debris torrent model, for example, would enable the identification of erosion hazard areas that could then be used to evaluate the relationships among past watershed management activities and as a screen for guiding future watershed management decisions.
- Remote-sensed vegetation data, including change scene detection data, should have been used to characterize forest health, growth and its relationship to cumulative watershed effects.
- The failure to spell out that peak flows in many watersheds within the Scott basin are unnaturally high due to land use impacts. Timber harvest and roads elevate the risk associated with rain-on-snow events and they increase peak flows, which, in turn, accelerate erosion and channel scouring which result in shallow, open streams that are then vulnerable to warming
- The lack of transparency of models and the data used in them is regrettable. All models and data utilized in the Scott TMDL should be available for public review. These datasets include all the GIS data (including roads, streams, and landslides), road surveys, temperature data, and macro-invertebrate data. In comments on the pre-draft, we requested access to these data so that we could evaluate them. Regional Water Board staff have sent only portions of the data, and have indicated that the rest of the data will be arrive later -- but have not yet delivered the missing data.

Implementation:

- Relies far too much on voluntary measures and needs to be strengthened to give dischargers more incentive to improve practices
- Failure to take necessary actions to ameliorate the impacts of water use on water quality.
- Failure to target essential coho salmon habitat and prioritize it for protection and restoration.

- While the technical analysis recognizes cottonwood gallery forest as the potential vegetation for valley riparian areas, the implementation chapter does not set forth a plan that will allow restoration of a more natural sinuous channel with a connection to its floodplain; without such changes, full riparian restoration will likely be confounded.
- Relies too heavily on the State's Forest Practice Rules program, which has been scientifically demonstrated, to both the California State Board of Forestry and the Regional Water Board, to be inadequate to protect stream habitat needed for the recovery of at-risk Pacific salmon like coho salmon. Waste Discharge Requirements are mentioned as a tool, but the TMDL should provide guidance for how they can effectively be used to set prudent limits on cumulative watershed effects risks by reducing road densities, road stream crossing density, and restricting the percent of watershed area that can be harvested.

Monitoring:

- The lack of a clear and specific monitoring plan that would help track the success of mitigation and restoration measures, and which would allow for cooperative adaptive management, including Tribal participation, as an element of the TMDL's implementation. The TMDL asserts that a monitoring plan will be developed later, but it would be better to formulate a preliminary plan now.

Spence et al. (1996) point out that aquatic habitat conditions are directly correlated to upland watershed health. The Scott TMDL needs to recognize that in order to restore aquatic habitat diversity capable of supporting species like coho salmon, watershed and riparian conditions need to trend more toward the natural range of variability of vegetative seral stage conditions and hydrologic functions.

The TMDL Action Plan will become an amendment to the North Coast Basin Plan (NCRWQCB, 2003). This will require that the Plan meet the standards of Section 13242 of the California Water Code concerning specific actions, their timing, and the Regional Water Board's responsibility for monitoring such actions and timelines necessary to achieve the water quality objectives that the State sets. The Tribe will be evaluating the final Scott TMDL closely to make sure that it describes mechanisms of degradation, methods of remediation, a timeline to reverse impairment, and clear monitoring steps to gauge the attainment of its water quality restoration objectives.

Additional data produced to support review and implementation of the Scott TMDL

Please review the linked ArcView project assembled by Kier Associates for support of review of the Scott River Sediment and Temperature TMDL on behalf of the Klamath Basin Tribal Water Quality Work Group.

http://www.krisweb.com/ftp/TMDL/scott_tmdl_gis_map_project.zip

These data have also been enfolded into the Klamath Resource Information System (KRIS) database for the Scott, taking advantage of the KRIS Map Viewer feature. Spatial data augment KRIS Version 3.0 and allow all Tribes, the North Coast Regional Water Quality Control Board staff, U.S. Environmental Protection Agency and others

cooperating in development of the Scott River TMDL. Data may be used in revision of the Scott River Sediment and Temperature TMDL, but should also prove useful in the implementation phase.

Kier Associates, on behalf of the Klamath Basin Tribal Water Quality Working Group, also produced a SHALSTAB model run for the Scott River watershed, resulting in a map of predicted unstable areas in the watershed. Due to its file size, the SHALSTAB run is being distributed separately. It is available for download at:

<http://www.krisweb.com/ftp/TMDL/ScottShalstab.zip>

Chapter 1: Introduction

Watershed Restoration and Enhancement Efforts: Section 1.4 of the Scott TMDL lauds the success of Scott River restoration programs, but supplies no data other than that for French Creek to demonstrate benefits to water quality. The *Mid-term Evaluation of the Klamath River Basin Fisheries Restoration Program* (Kier Associates, 1999) is not referenced, although it provides a useful overview of the success of the projects and changes in habitat during the duration of the program efforts that began in 1985. The Scott TMDL needs to require that all data useful for evaluation of restoration projects be publicly shared and it needs to specifically define needed monitoring associated with current and future restoration projects, including organized photo points. Restoration and protective actions need to target those areas with the greatest existing aquatic and biological diversity as a priority (Bradbury et al., 1996).

1.5.6 Hydrology:

The following language was added to section 4.1.2.2, which addresses a pre-draft TMDL comment (QVIC 2005b) that aggradation can also contribute to diminished surface flow, “(Channel dewatering can also be affected by channel aggradation as a result of increased sediment loads.)”

The Hydrology section has discussions of ground water and its relationship to surface flows that would be improved if the effects of wells were included. (for additional comments on groundwater and wells, see section 4.1.2.2 and 5.1.8.2 below)

Chapter 2: Problem Statement

2.3.1 Salmonid Populations

The final Scott TMDL needs to explicitly recognize what is known about coho salmon in the Scott River basin as recommended in early comments by QVIC (2004, 2005b). We suggest that the following language be added to the end of the second paragraph on page 2-5 (after “... no population estimates were made from this information): “In recent years, many surveys have been conducted to identify locations where coho salmon spawn (Quigley, 2005, Maurer, 2002; Maurer, 2003; SRCD, 2004). These data provide clear indication of a difference in strength between year-classes (two are weak and one is strong), and that all

three brood years are showing positive trends (SRCD, 2005). CDFG (2004) and others have produced detailed maps of coho salmon distribution within the Scott River watershed (Figure 1).



Figure 1. Suspected and confirmed range of coho salmon in the Scott River watershed. From CDFG (2004).

The risk of coho stock loss is high when there are very weak year classes (Rieman et al., 1993; CDFG, 2004). The Final Scott TMDLs in the Scott River basin need to recognize that aquatic habitat problems must be resolved or, at least, showing major recovery trends by 2015-2020, when ocean conditions are likely to enter a period of poor survival for salmon due to the Pacific Decadal Oscillation (Collison et al., 2003).

While the Scott River TMDL posted a chart of fall chinook salmon trends, it did not discuss the fact that the 2004 adult return was the lowest of all time. The South Fork Trinity TMDL (U.S. EPA, 1998c) has goals for recovery of fall and spring chinook populations and the final Scott TMDL should advance similar biological targets. Kier Associates (1999) point out that egg survival of fall chinook spawning in the Scott River canyon may be low due to the potential for intrusion of sand into redds. The final Scott TMDL needs to recognize the basin's pattern of use by fall chinook and specifically address the abatement of sediment problems in the canyon where California Department of Fish and Game data show they spawn (Figure 2).

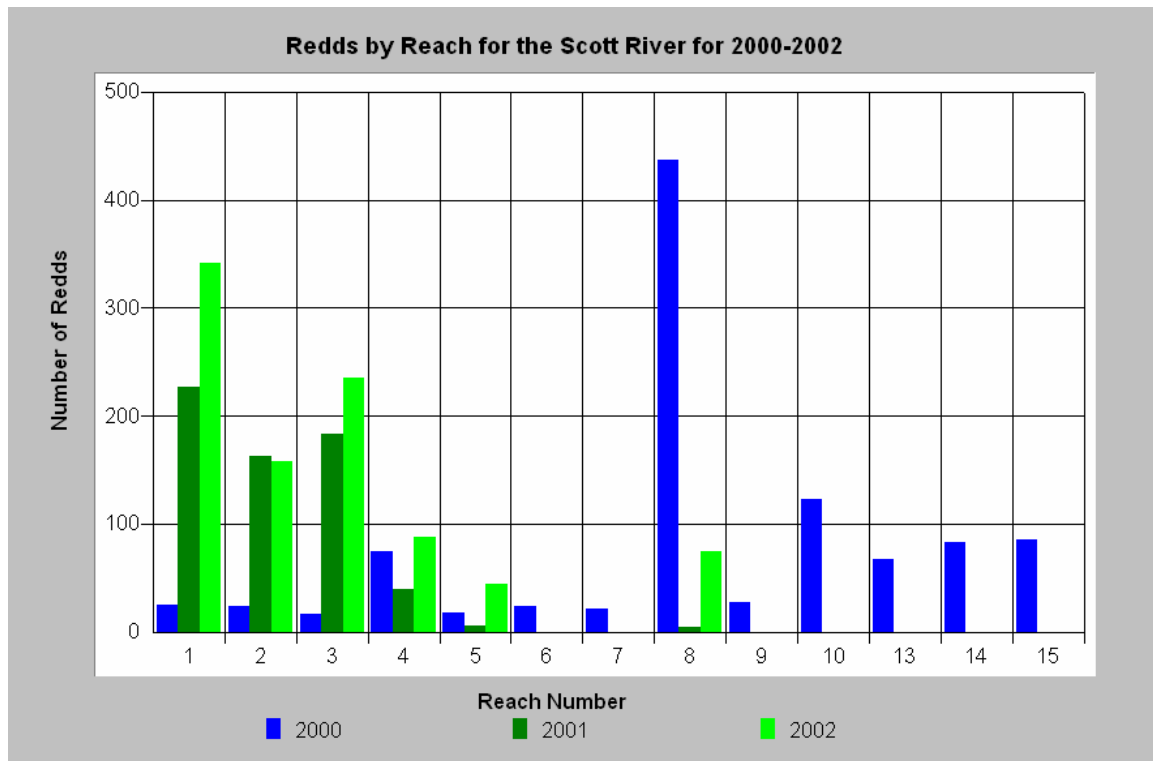


Figure 2. Data from CDFG spawner surveys show that fall chinook salmon spawned mostly in the lowest five reaches of the Scott River in 2001 and 2002, where eggs may be vulnerable due to high bed load of decomposed granitic sands.

The Scott TMDL should recognize also that spring chinook and summer steelhead recovery may be attainable, due to metapopulation function (Rieman et al., 1993), if coldwater refugia are restored in the lower Scott River, sediment burdens diminished, and stream flows improved.

2.4 Sediment Problem Statement: The Scott TMDL Problem Statement should specifically recognize the processes that are causing pollution and the linkages between human activities and water quality impairment. While the origin and mechanisms of water quality problems in the Scott River are well documented (Kier Associates, 1991; 1999; CH2M Hill, 1985), the problem statement describes these relationships only vaguely.

Section 2.4 of the Scott TMDL avoids clear discussion of major topics that must be addressed honestly if sediment pollution is to be abated: 1) road densities and crossings need

to be quantified and limits set to reduce the risk they represent for sediment pollution and damaging peak flows, 2) timber harvests and their links to cumulative watershed effects must be described and disturbance limits set, 3) forest growth needs to be assessed to confirm the assumptions made concerning watershed recovery to background levels for sediment yield and natural hydrologic function, and 4) unstable areas need clear identification so that activities on these areas can be limited.

2.4.1.2 Sediment Desired Conditions and 2.4.3 Watershed Sediment Conditions in the Scott River Watershed

Our comments on these sections are combined. See below for details on each topic.

Road Densities and Road Effects

The issues raised by Kier Associates (2004, 2005a, 2005b) regarding road density have not addressed in the draft Scott TMDL. While recognizing that problems are sometimes associated with roads, there is no target or threshold set to remedy impairment. Although the Scott TMDL mentions road density limits of 2.5 mi. /sq. mi. set by Armentrout et al. (1999) for those Lassen National Forest streams which harbor anadromous salmonids, it fails to set a similar standard: "The Scott River TMDL Action Plan does not propose road density as a specific desired condition for the Scott River watershed, although a decreasing trend in road densities would be beneficial." This is only one of many areas where there is no enforceable, follow-up action to assure the abatement of water quality problems. A target for road densities of less than 2.5 mi./sq. mi should be included in Table 2.4.

Cedarholm et al. (1981) found a direct correlation between road densities and increases in fine sediment harmful to salmonid spawning in streams. The U.S. Forest Service (1996) compared data for bull trout and other salmonid species with road densities over 3,000 interior Columbia River basin watersheds. They concluded that: "the higher the road density, the lower the proportion of sub-watersheds that support strong populations of key salmonids" and that bull trout were absent from watersheds with more than 1.7 mi. /sq. mi. of watershed area. They also found a relationship between fine sediment in streams and road density. The USFS (1996) road density classification is shown as Figure 3. The National Marine Fisheries Service (1996) has required that road mileage be reduced in USFS and BLM lands in the interior Columbia River basin with an emphasis on "road closure, obliteration, and revegetation" where road densities exceed 2 mi. /sq. mi. on.

Roads are known to cause higher erosion on unstable rock types, such as decomposed granite (DG), in the Scott River basin (Sommarstrom et al., 1990). Consequently road density targets for sub-basins with DG need lower targets than 2.5 miles per square mile. Sommarstrom et al. (1990) found that road densities were already 3.7 miles per square mile in the Scott's DG areas in 1990. The only analysis of road density in the Scott TMDL is in Table 3.3, where densities are amalgamated into TMDL sub-basins, which may ignore extremely high localized road conditions, such as the 8.9 mi./sq. mi. of roads on private industrial timber land in Shackleford and Mill Creeks (SHN, 1999).

The VESTRA-developed GIS layer of roads used by the RWB for its TMDL under-represents roads and skid trails in some areas of the Scott watershed (Figure 4). Only major haul roads are included, which means that many temporary roads and skid roads that can increase erosion remain unaccounted. This should be noted under margins of safety in 3.5.4.

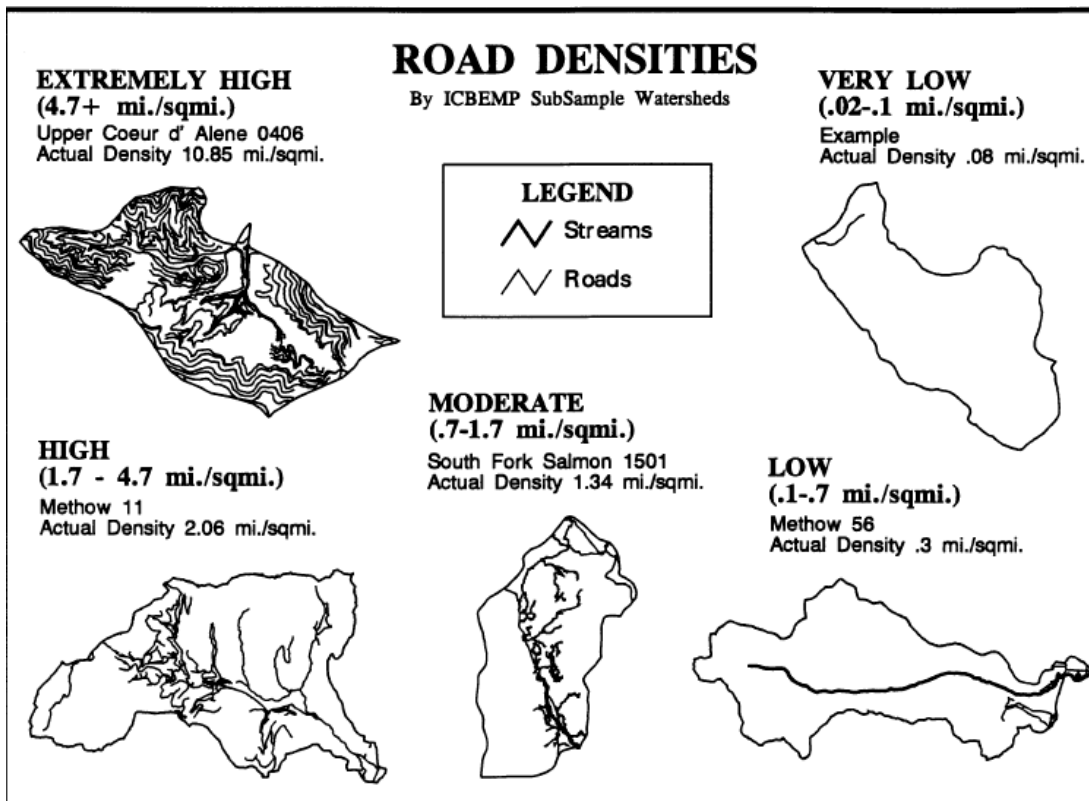


Figure 3. This figure shows the road density classification for the Interior Columbia River basin that is recognized by the USFS (1996) in relationship to maintaining aquatic biodiversity.



Figure 4. This map is of the upper Patterson Creek drainage and shows mapped roads in red, but USGS orthophotos also displayed show many more roads than are mapped.

The final Scott TMDL should provide a table of road densities by Calwater Planning Watershed. There are 68 Calwater Planning Watersheds in the Scott River basin. A chart should be made for each of the sub-basins where there is high road densities associated with land management. These charts and tables could be easily made from existing data by a capable GIS analyst, of which the RWB has several. In the sediment source analysis for the mainstem Trinity River (Graham Matthews and Associates, 2001), table 37 (page 127) were presented showing road lengths, drainage area, and road densities. An example of a chart made from such data by Graham Matthews and Associates (2001) may be seen at http://www.krisweb.com/krisklamthtrinity/krisdb/webbuilder/nt_c17.htm

A major reason that Scott River basin road densities need to be reduced is that they can alter the hydrology of the watershed as described by Jones and Grant (1996). Roads that cut into hillsides often disrupt sub-surface drainage increasing peak flows during storm events and decreasing ground water recharge that supports summer base flows. Increased peak discharge can also simplify channels, wash away large woody debris, fill pools and cause bank erosion (Montgomery and Buffington, 1993). Without reducing road densities and restoring natural hydrology, natural flow regimes with which salmon co-evolved cannot be restored.

Stream Crossings with Diversion- or Significant Failure Potential

Section 2.4.3.1 of the Scott TMDL deals with the potential for failure at road crossings, but fails to note that some stream crossings in steep areas may cross the paths of debris torrents. The USFS replaced culverts with concrete fords in such high-risk areas of high in the lower Scott River (Kier Associates, 1999). The Klamath National Forest (KNF) study of the 1997 flood (de la Fuente and Elder, 1998) indicated that channel scour in many tributaries was caused by multiple culvert failures at different locations on the same stream. In a study of Sierra streams, Armentrout et al. (1998) recommended that stream crossings be limited to less than 2 per mile of stream to prevent catastrophic failure of “stacked culverts.” The TMDL should limit the number of stream crossings and recommend that the USFS method of changing crossing types in high-risk locations be carried out on private land as well. A target of less than 2 crossings per mile of stream in high-risk areas should be added to Table 2.4.

Information should be included in this section from Klamath National Forest data collected as part of the de la Fuente and Elder (1998). The KNF coverage “damage_all” contains information from Emergency Relief Federally Owned (ERFO) Damage Site Reports from the 1997 post-flood field assessments by Forest Engineering. Joining that coverage with its lookup table “all_lut.xls” allows for the viewing of flood damage sites by type. Of the 39 sites identified in the Scott River watershed, 29 were road/stream crossing failures (type “S” in lookup table). It is unknown how many road-stream crossings were surveyed, but the failure rate is likely higher than the TMDL target of 1% of crossings failing in a 100-yr return interval storm, given that the 1997 storm was only a 14-year return interval storm.

Hydrologic Connectivity

The Scott TMDL discussion on Hydrologic Connectivity (in 2.4.1.2) makes assumptions with regard to road-related projects on timberlands that may not be supported. For example, it implies that roads can be hydrologically disconnected and that impacts from roads can be fully mitigated without reducing road densities. A RWB commissioned study

by an independent science review panel on coastal streams (Collison et al., 2003) indicated that similar assertions made by Pacific Lumber Company in their watershed analyses (PL, 2002) were unfounded. Collison et al. (2003) noted that “storm-proofing and road upgrading are suggested in the prescriptions to overcome excess sediment production; however, no data have been presented that demonstrates the effectiveness of these programs.” Upgrading roads can reduce but not eliminate hydrologic and sediment impacts. Even if roads are well-built and maintained, dense road networks can still cause problems due simply to the sheer number of road miles. If the Scott TMDL applies assumptions related to roads and erosion, the Implementation Plan should require a validation of such assumptions, both with respect to sediment yield and changes in hydrology.

Annual Road Inspection and Correction

Section 2.4.3.3 of the TMDL recognizes the need to inspect roads at least annually and to correct problems promptly when they occur, but it fails to include any enforceable language to meet that objective. The KNF has approximately three times more road miles than can be annually inspected and actively maintained (de la Fuente and Elder, 1998). This suggests that the KNF road network needs to be substantially reduced if road-related erosion is to be controlled. The Redwood Creek TMDL (U.S. EPA, 1998) specifies that “All roads are inspected and maintained annually or decommissioned” and that “Roads that are closed, abandoned, or obliterated are hydrologically maintenance free.” The road network in the Scott River basin is well beyond that which can be maintained, and a similar requirement to that in the Redwood Creek TMDL is needed for the Scott TMDL.

Activity in Unstable Areas

There is no specific discussion of disturbance of chronically unstable areas by timber harvest or road building in the Scott TMDL: “analysis of activities in unstable areas was not conducted for this report.” The document recognizes that the shallow landslide stability (SHALSTAB) model can be used to successfully predict “chronic risk areas including steep slopes, inner gorges, and headwall swales” (Dietrich et al., 1998) and it also notes the increased failure risk associated with inner gorge locations (Graham Matthews and Associates, 2001). Kier Associates (Derksen, 2005) used 10 meter USGS DEM data to run the SHALSTAB model for the Scott River watershed and has provided that data to RWB staff for use in drafting the final Scott TMDL (Figure 5). This reconnaissance-level activity showed a high correlation between high-risk areas for shallow landslides and those landslides actually mapped by the USFS (de la Fuente and Elder, 1998).

We recommend that the RWB and other use SHALSTAB as a preliminary screen, not necessarily as the ultimate decision tool, to identify unstable areas requiring protection in the Scott TMDL. If actions are proposed in the identified areas, then an on-the-ground survey by a geologist could provide field-based information to supplement the SHALSTAB model.

SHALSTAB maps should be included in Section 2.4.3.6 of the TMDL, and should also be made available electronically in a GIS format. The SHALSTAB maps should also be used in GIS analyses to quantify the percentage of the predicted unstable areas that have been disturbed in each Calwater Planning Watershed.

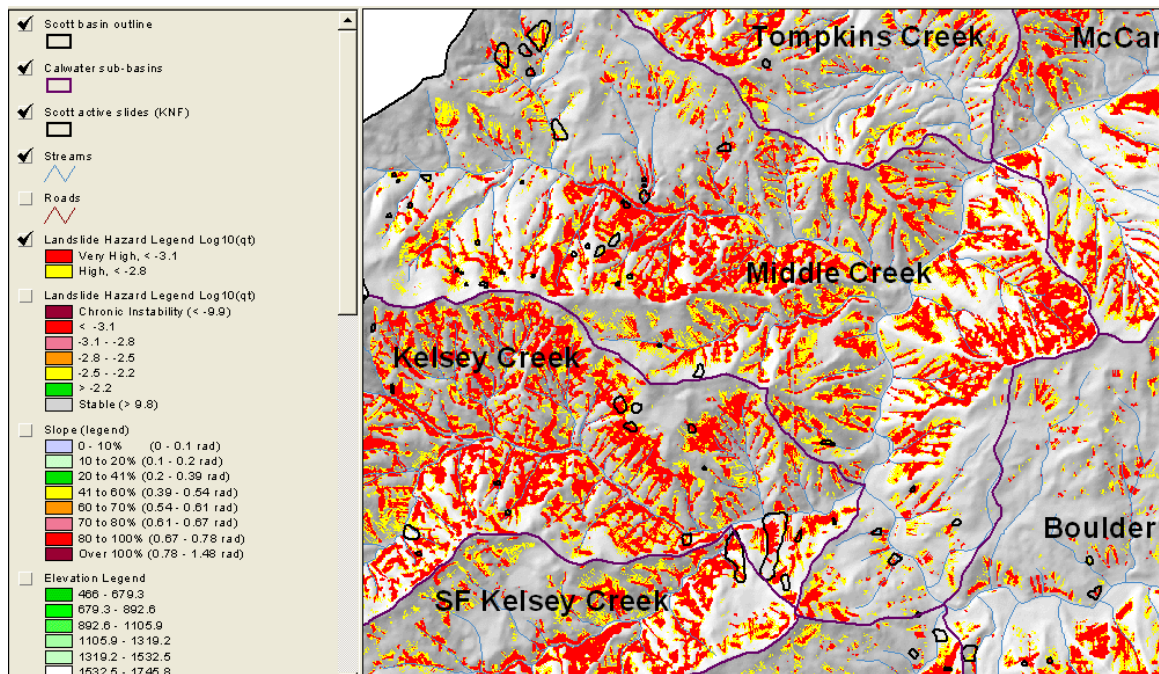


Figure 5. This map is taken from an ArcView project by Derksen (2005) and shows that the risk of shallow debris torrents in the lower Scott River is high and that the large majority of landslides mapped by Klamath National Forest scientists occurred on areas shown here as high risk.

Disturbed Areas

While Section 2.4.3.5 of the Draft TMDL is correct in stating that there is no information or analysis “sufficient to identify a threshold below which effects on the Scott River watershed would be insignificant”, it would still be valuable to use existing data to calculate disturbed areas. Timber harvest data are available for all periods from the Klamath National Forest, but only between 1991 and 2001 on private land from CDF. Similar to the road density and road location maps requested above, we recommend that the RWB include TMDL tables and charts of the percentage of each Calwater Planning Watershed that has been timber harvested over the period of available data, and include them in section 2.4.3.5.

There is no indication there was any serious effort by the TMDL authors to quantify timber harvest, except generally under “activities”, on unstable lands even though timber harvest has been linked to sediment production and changes in hydrology by recent northern California studies conducted for the State, including for the RWB itself (Ligon et al, 1999; Dunne et al, 2001; Collison et al., 2003). Reeves et al. (1993) suggest that a maximum of 25% of a watershed should be harvested in 30 years in order to maintain diverse assemblages of Pacific salmon. Ligon et al. (1999) pointed out that the lack of quantification and limits on timber harvest was confounding efforts to control watershed impacts and protect Pacific salmon in California.

Sommarstrom et al. (1990) indicated that “39% of the granitic area has been harvested, not including site re-entries, based on data from 1958-1988 for public lands and 1974-present for private lands.” Decomposed granitic soils are notoriously xeric after timber harvest and the regeneration of forest vegetation can be slow (TCRCD, 1998). Consequently, timber

harvests not mapped by the RWB and its staff that occurred between the late 1970s and 1992 may still be contributing to cumulative watershed effects, including sediment yield.

Analysis of Cumulative Watershed Effects

The RWB staff should be using remote sensing data for reconnaissance and analysis, such as change scene detection, to understand the patterns of landscape disturbance and forest growth and to build that knowledge into the TMDL. Change scene detection involves the use of a series of Landsat scenes from different years in order to compare patterns in landscape change over a given period (Levien et al., 2002). The necessary data are available from the California Department of Forestry (CDF) and U.S. Forest Service Spatial Analysis Lab in Sacramento for the period 1994-1998.

Figure 6 shows a summary of change scene data from 40 of the 68 Scott River Calwater Planning Watersheds sorted by the highest level of disturbance. Areas with the highest rates of recent disturbance have the greatest risk of CWE and should be studied as a priority and called out as a concern. The northeastern and northwestern parts of the Scott Valley (the West Canyon and East Canyon sub-basins) watersheds had the highest change in vegetation owing to the high rates of timber harvest on both private and USFS lands. Patterns of disturbance include sensitive headwaters areas, inner gorge locations, and riparian zones (Figures 7 and 8).

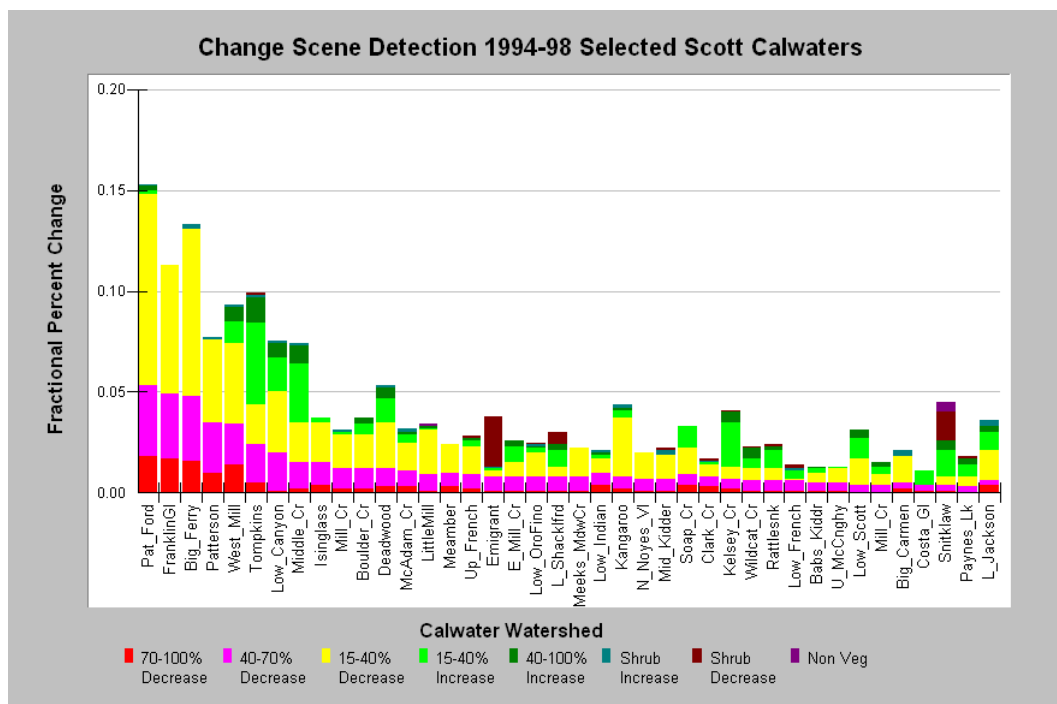


Figure 6. This chart shows change scene detection for 40 Calwater Planning Watersheds in the Scott River basin based on USFS and CDF interpretation of Landsat scenes from 1994 and 1998.

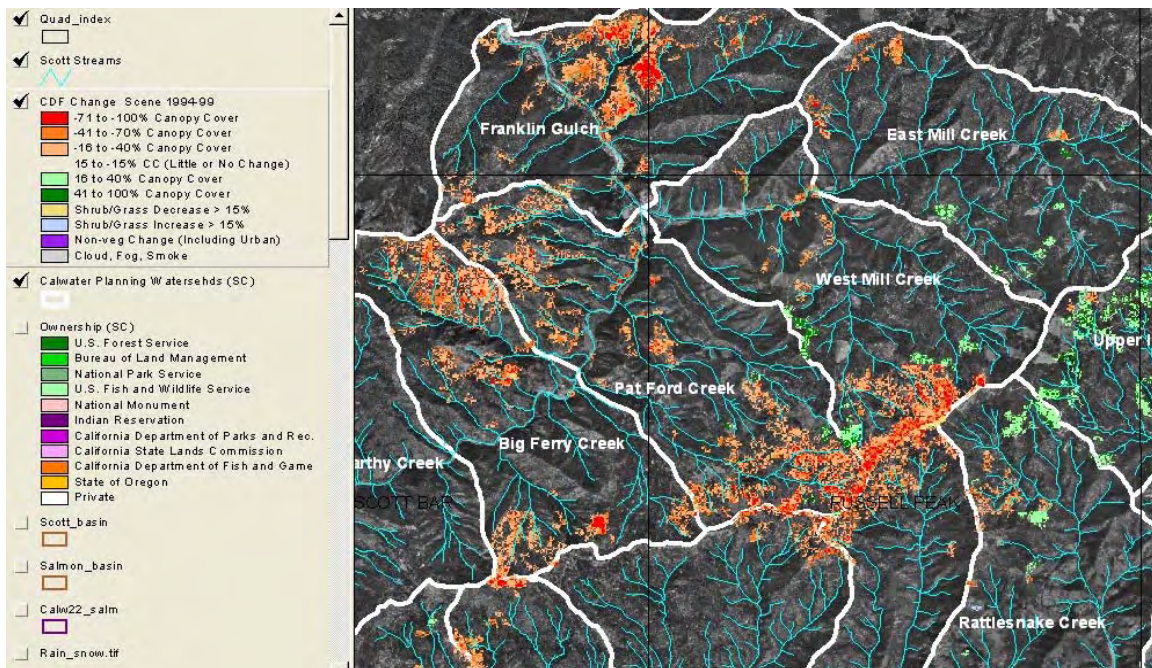


Figure 7. Landsat change scene detection from 1994-1998 shows major canopy reduction.

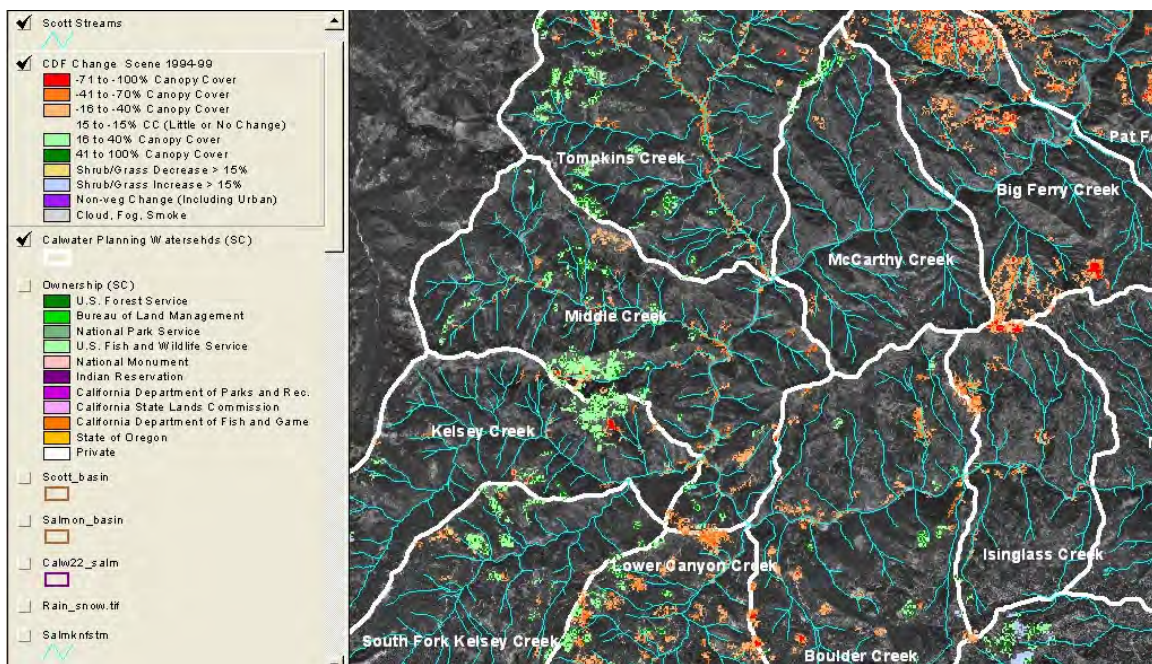


Figure 8. Change scene detection from 1994 and 1998 Landsat images for West Canyon sub-basin areas shows forest canopy reduction from logging (orange and red) and forest regrowth (green) where trees are growing back in areas formerly harvested or burned.

The West Canyon (northwestern area of Scott watershed) is largely owned and managed by the U.S. Forest Service, but timber harvest activity is widespread (Figures 7 and 8). While canopy reduction shows areas recently harvested, it shows tracks of debris torrents and channel scour as linear patterns bordering Tompkins Gulch and lower Middle and Kelsey

Creeks. The channel-resetting debris torrents caused by the January 1997 storm were a very high level of impact for a 14-35 year return interval event (de la Fuente and Elder, 1998). Patterns of disturbance indicated that roads, clear cuts, and previous fires tended to elevate contributions of sediment (Figure 7) and those failures often occurred in the rain on snow zone. Green polygons displayed in change scene data indicate growth in areas that were logged previously or disturbed by fire in the 1980's. Forest recovery after logging in this geographic area is good because it is the wettest portion of the Scott River basin, but regeneration in more arid sub-basin areas appears much lower.

Although the TMDL did not identify impacts from landslides and sediment to the East Fork Scott River sub-basin, the East Fork experienced channel scour and flood damage as a result of the January 1997 storm event (Kier Associates, 1999). Timber harvest was high during the period of 1994-1998 on public and private land in some areas that are likely subject to rain-on-snow events in this sub-basin (Figure 8). Patterns of disturbance in transient snow zone and linkage to increased peak flow and channel scour of the East Fork need to be explored. Lack of tree growth in areas previously harvested may cause a window of extended risk for rain-on-snow events (Figure 9). Patterns of road failures from de la Fuente and Elder (1998) are similar to other areas in the transient snow zone. These patterns likely extended to private timber lands in the Westside TMDL sub-basin but lack of access to private lands prevented appropriate assessment by RWB staff.

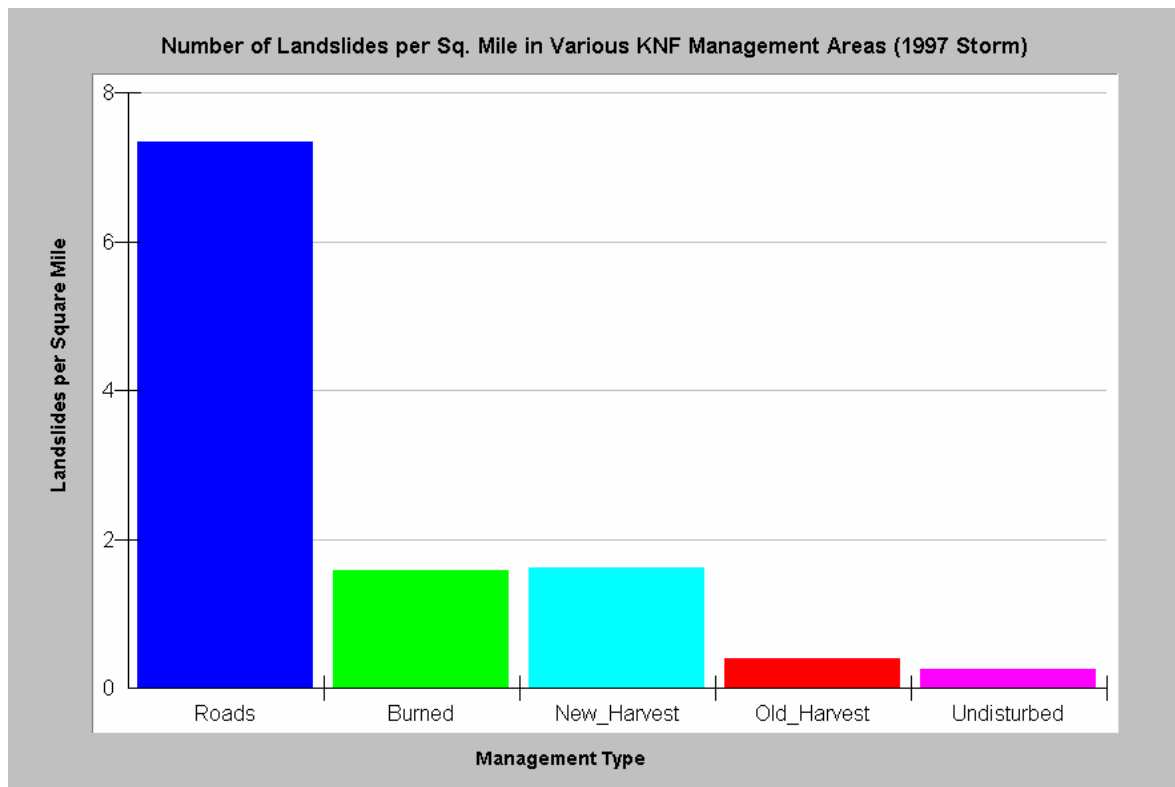


Figure 9. This summary chart is based on data from de la Fuente and Elder (1998) regarding 1997 flood effects and shows few landslides occurred on undisturbed lands of the Klamath National Forest, and slide frequency was associated with human disturbance.

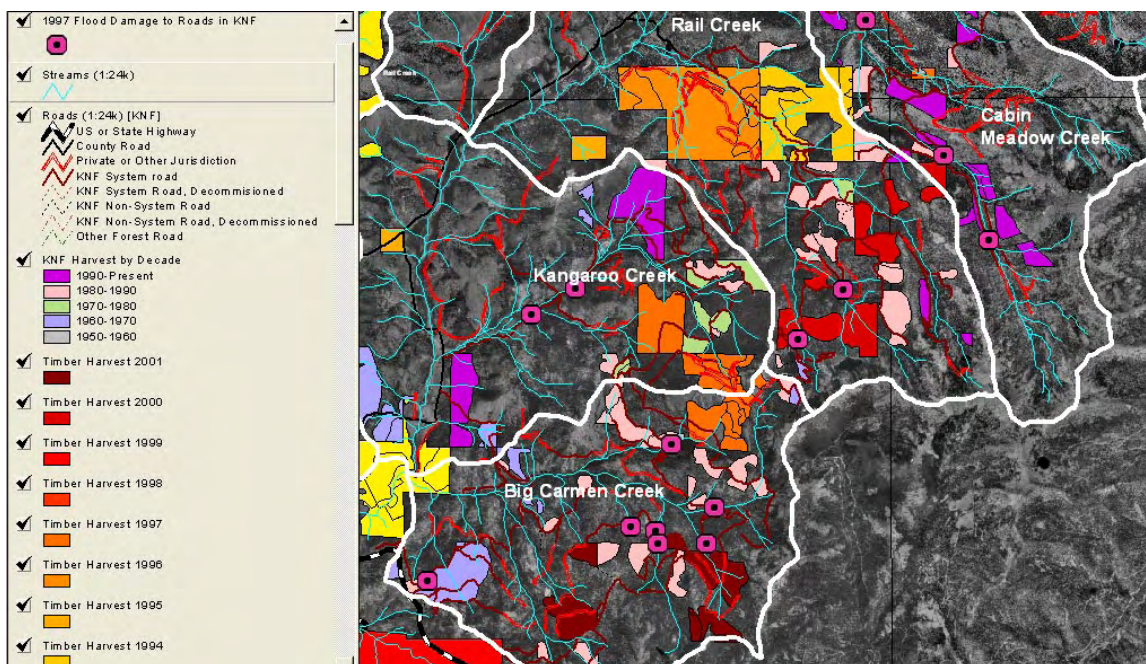


Figure 10. Several East Fork Scott River Calwater Planning Watersheds are shown here with timber harvests, roads and 1997 flood damage sites indicating cumulative effects. Lands include a mix of private and USFS ownership. Data are from the USFS and CDF. Discussion below.

Berris and Harr (1987) and Coffin and Harr (1991) found that old forests trap snow in the canopy and return moisture directly to the atmosphere as a result of ablation. They found that snowfall in a heavily managed or clear-cut forest tends to build up in a snow pack that is less subject to ablation. Consequently peak flows in the transient snow zone may be increased over normal by rain-on-snow events.

Figure 8 shows change scene data for 1994-1998 in the East Headwater TMDL sub-basin with extensive timber harvest, but little forest re-growth. Figures 9 shows Klamath National Forest timber harvests by decade in the Kangaroo Creek and Big Carmen Calwater Planning Watersheds, followed by remote sensing vegetation data in the same area (Figure 10).

Comparing the two maps shows that there was little or no re-growth after timber harvest in the 1980s with the polygons of previously logged areas showing up clearly as Non-Forest or Saplings. This indicates problems with forest regeneration. Such stunting would lead to increased and continuing risk of damaging flows due to rain-on-snow events.

A map of the transient snow zone (Figure 11) needs to be added to the Scott TMDL as well as a discussion of increased peak flow, channel scour and resulting increased water temperature. The rain-on-snow zone information provided by Kier Associates is based on Armentrout et al. (1999) and recognizes 3,500 to 5,000 feet in elevation as the area of greatest risk. In order to truly remediate problems as required by law, the TMDL should call for reduced road densities and timber harvest, especially in the transient snow zone.

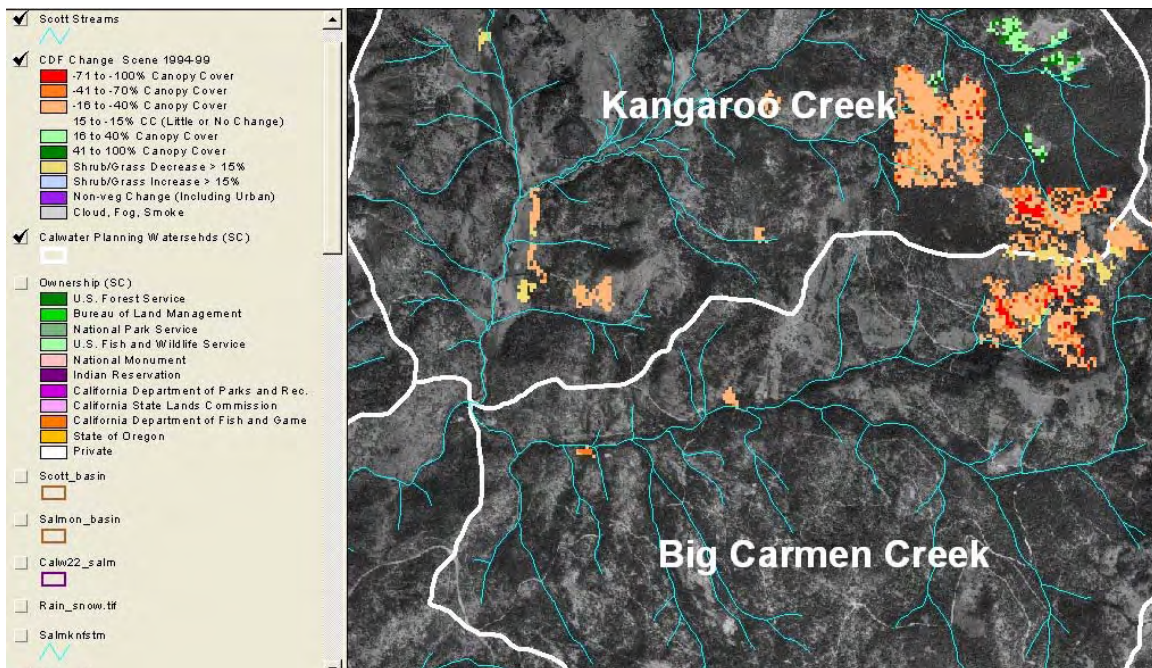


Figure 11. Change scene detection from the USFS and CDF (1994-1998) in East Headwater TMDL basin shows decrease in canopy due to timber harvest, but little forest growth (green). Note that Big Carmen Calwater has widespread indication of earlier logging, sparse tree cover, but no signs of canopy increase.

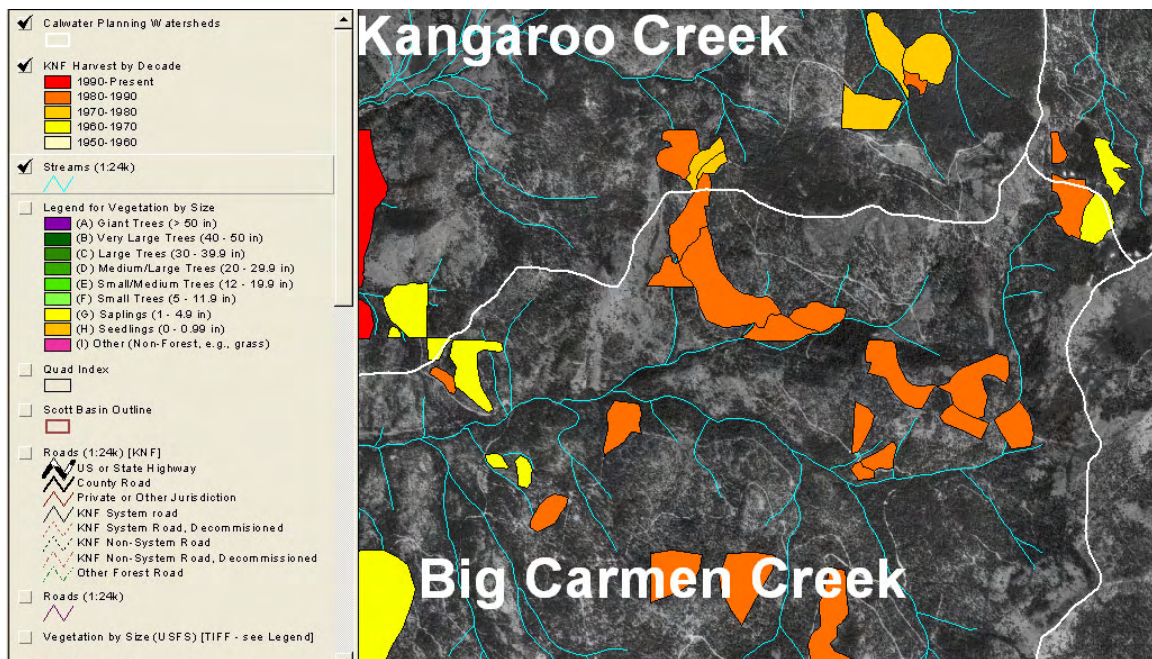


Figure 12. Klamath National Forest timber harvests by decade are displayed for parts of the East Fork Scott in the Kangaroo and Big Carmen Creek Calwater Planning Watersheds. Note the shape of polygons of timber harvest in the 1980s for comparison with Figure 9.

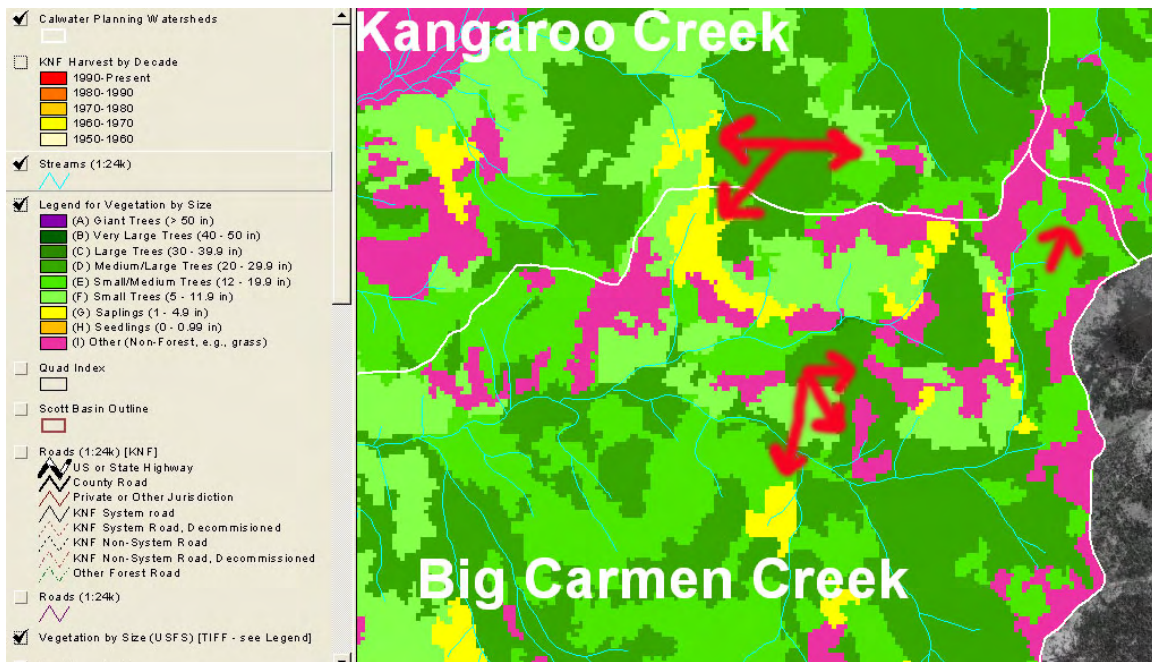


Figure 13. This map of vegetation and tree size is derived from a 1998 Landsat image and shows the same geographic extent as Figure 8. Note that polygons from previous harvest in the 1980s are clearly visible as Non-Forest and Saplings (red arrows point out), indicating extremely slow vegetation growth, which extends the duration of cumulative effects risk of increased flows, especially since this area is in the rain-on-snow events zone.

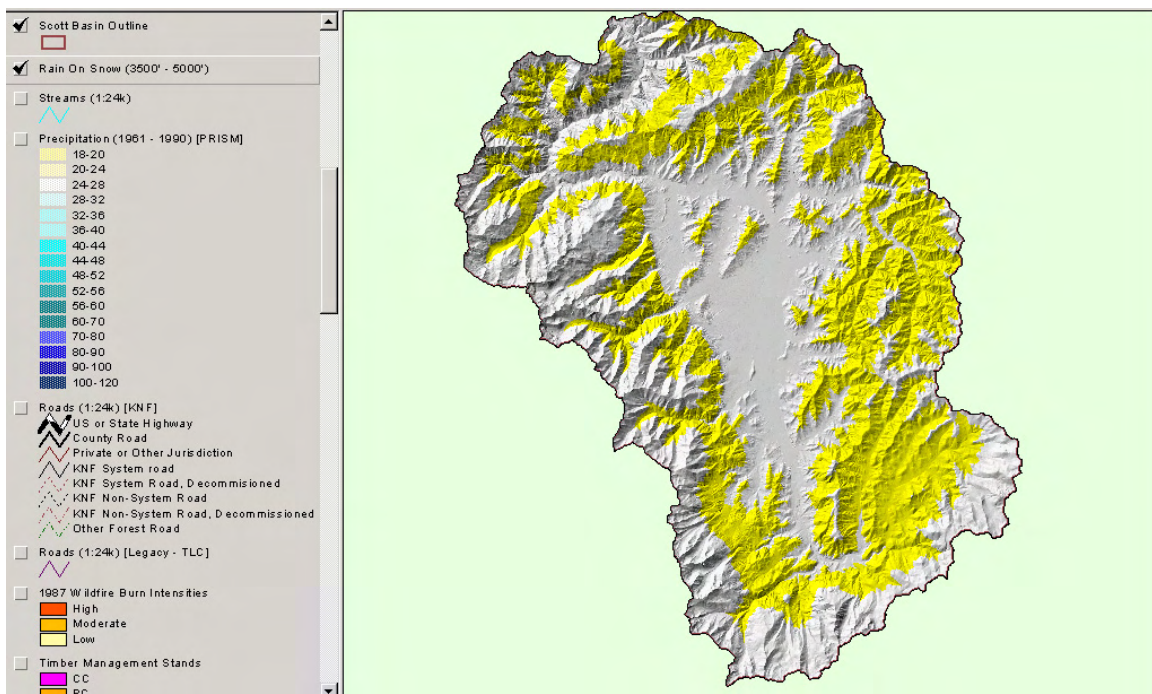


Figure 14. This map shows a band of elevation from 3500 feet to 5000 feet to represent the transient snow zone in the Scott River basin following the convention of Armentrout et al. (1999).

2.4.2 In Stream Sediment Conditions: Table 2.2 in section 2.4.1.1 of the Draft Scott River TMDL partially remedies deficiencies pointed out in pre-draft TMDL comments (Kier Associates, 2005b) by including reference targets for some instream conditions. While many targets are those adopted by previous TMDL processes (U.S. EPA, 1998a; 2001), several found in other north coast studies have been overlooked. The following parameters should be added to Table 2.2: cross-sections, median particle size distribution, volume of sediment in pools (V^*), turbidity, mainstem pool depths, and tributary pool depths (see details below). The RWB staff acquired a great deal of data related to channel conditions for the Scott TMDL, but useful summaries (i.e. charts or tables) for most of the datasets are missing from the document.

2.4.2.1 Benthic Macroinvertebrate Assemblages: The Scott TMDL sets target conditions using the Russian River Index of Biotic Integrity (IBI) for comparison. Although the IBI was derived without control streams as part of sampling regimes, values seen in Table 3.2 seem similar to those used nationally to describe healthy streams (Barbour et al., 1999; Barbour and Hill, 2003). The use of the IBI index score of 18 is appropriate, but the EPT Index, Percent Dominance Index and Richness targets in Table 3.2 should also be applied.

2.4.2.2 Riffle Embeddedness: While riffle embeddedness is one measure of suitability for salmonid spawning, it is more subjective than fine sediment measurements. The USFS survey data acquired by the RWB for the Scott TMDL were not provided with any metadata, so it is not known whether all reaches measured were of the same gradient or if channel confinement varied between sites. Habitat typing data for the Scott River basin should have been acquired and queries run for embeddedness so that in-stream conditions could be compared between watersheds with varying upland conditions. (See chart example at http://www.krisweb.com/kristenmile/krisdb/webbuilder/bw_c15.htm)

2.4.2.3 Large Woody Debris: Because there are no data regarding large wood in streams, discussion of its abundance and distribution are lacking in the Scott TMDL. This is a substantial problem because of the importance to coho salmon of pools formed by large wood (Reeves et al., 1988) and because large woody debris may be linked to downwelling and improved local water temperature conditions (Poole and Berman, 2001). Change scene detection shows extensive timber harvest in riparian zones (see Temperature section below). Reeves et al. (1993) found that timber harvest reduced large wood supply to streams, which compromised habitat diversity and caused loss of Pacific salmon species diversity. McHenry et al. (1998) described major reduction of large wood in Olympic Peninsula streams and noted that time required for re-growth of trees large enough to assist aquatic habitat complexity could require over 100 years.

Large wood delivery in steep, headwater swales is largely a result of landslides. If areas with high risk of debris sliding are harvested, the rate of failure increases as a result of loss of root strength (Ziemer, 1981), but large wood that would help meter sediment can be greatly reduced (PWA, 1998). The Scott TMDL needs to follow the guidance of Dunne et al. (2001) and use the best available tools, including remote sensing data and models to examine the relationship of timber harvest and large wood recruitment, particularly in tributaries that are known to be critical habitat for juvenile coho salmon rearing. The final TMDL should specifically describe problems with timber harvest in riparian zones in or above reaches

inhabited by coho salmon so that large wood recruitment can be protected as part of waste discharge requirements under the timber harvest planning process.

2.4.2.4 Pool Distribution and Depth Conditions: Based on comments submitted on the pre-draft, staff added information on pool distribution and depth conditions to the TMDL. These data further confirm sediment impairment in the Scott River watershed. If RWB staff have habitat typing data in electronic form, then summary charts of pool frequency and depth should be constructed similar to one for the Ten Mile River (IFR, 2001) (see http://www.krisweb.com/kristenmile/krisdb/webbuilder/bw_c16.htm). The Redwood Creek TMDL (U.S. EPA, 1998b) specifies that pool depths in streams larger than 3rd order in size have pools at least 1-1.5 meters in depth, which should be applied to Scott River tributaries. Targets for mainstem Scott River pool depth should be set based on historic accounts and should be at least ten feet based on watershed size.

2.4.2.5 Percent Fines Conditions: The Scott TMDL should avoid making references that upper limits, such as 30% fines < 6.4mm, are fully acceptable. Kondolf (2000) showed that this is a level where 50% mortality of salmonid eggs can be expected. Fine sediment data from Lester (1999) for lower Scott River tributaries should be listed in a table and reaches where study was conducted shown on a map.

Discussions of sediment trends as measured by Sommarstrom et al. (1990) and Sommarstrom (2001) need to acknowledge that pollution from sand sized sediment is increasing at most locations, not decreasing (Figure 12). The extremely high fine sediment levels at mainstem Scott River locations indicate that there is still a substantial over-supply, although French Creek and Etna Creek sediment less than 6.4 mm decreased.

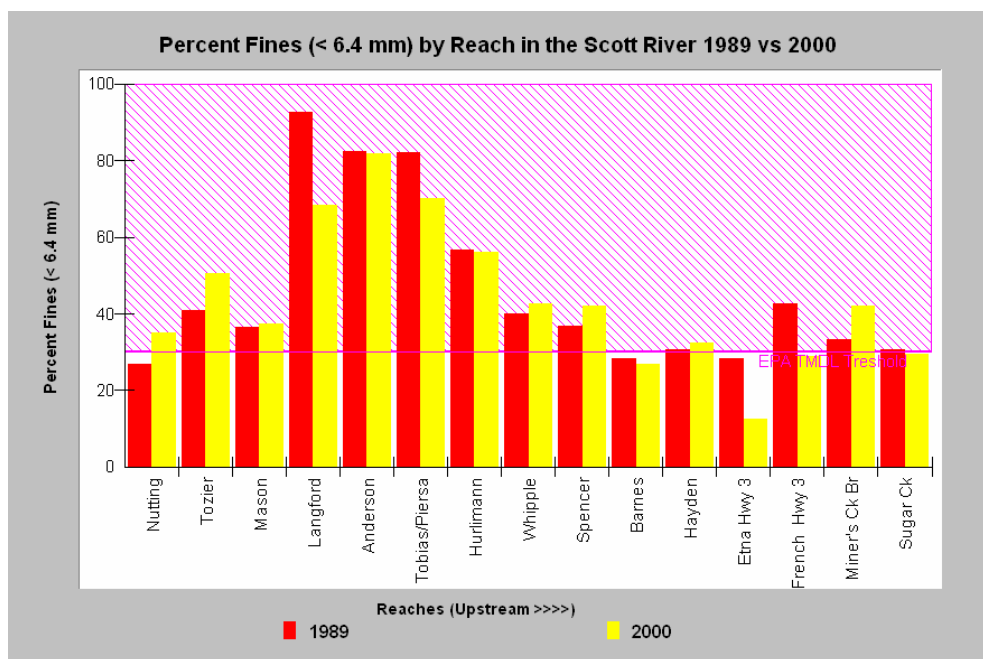


Figure 15. Summary chart showing fine sediment less than 6.4 mm at 11 mainstem Scott River locations and at four tributary locations.

Cross Sections and Longitudinal Profiles: The Scott TMDL does not deal with fine sediment transport and habitat impairment in the lower Scott River, where no data were collected by Sommartstrom et al. (1990). The results of fine sediment (<6.4 mm) indicate a continuing supply of sand to the Scott River. The high amount of sand in the valley is transported through the lower Scott River Canyon (Figure 13) where the highest annual fall chinook spawning takes place. Long term trends in sand supply and bedload transport are needed to see whether the requirements of fall chinook salmon are improving. The TMDL needs to provide a mechanism for measuring impairment and trends toward recovery.

Volume of Sediment in Pools (V*): The volume of fine sediment in pools relative to water and fine sediment combined or V* (Lisle and Hilton, 1992) has been used in French Creek in the Scott River watershed to show decreased sediment supply in response to road related restoration. Discussions of V* data in the Scott River watershed in section 2.4.2.7 are good but the V* should also be included in Table 2.2, with a target value of <0.10.

Median Particle Size Distribution: The work of Knopp (1993) also justifies the use of a target for a minimum median particle size distribution of 37 mm. Median particle size may also become very large in response to increased peak flows related to rain on snow events (Montgomery and Buffington, 1993). An upper limit for salmonid suitability should be adopted into the final Scott TMDL based on U.S. Forest Service studies (Gallo, 2002). Reynolds (2001) used median particle size with an upper limit of 90 mm for optimal size for salmonids and 128 mm as fully unsuitable in the Ecosystem Management Decision Support (EMDS) model.

Turbidity: The relationship between turbidity and timber harvest in northwestern California have been well studied in recent years (Klein, 2004), with increasing disturbance leading to both increase in peaks and duration of turbidity. Sigler et al. (1984) demonstrated that turbidity over 25 nephelometric units (ntu) limited steelhead juvenile growth. The latter threshold should be adopted by the Scott TMDL. Elevated turbidity has been noted as a specific problem in Moffett Creek (Kier Associates, 1999).

2.5 Temperature Problem Statement

The discussion of temperature problems in the Scott River lacks an interdisciplinary approach needed to show complex interactions that can ultimately result in water pollution. Discussions above note that channel changes related to increased peak discharge can make channels wide, shallow and open, which promotes stream warming. The TMDL did not use all available water temperature, which hampered examination of cumulative effects and elevation of water temperatures. The final Scott TMDL also needs to clearly recognize that water temperatures in smaller tributary basins accessible to coho salmon or that feed salmonid refugia in the Scott River canyon are controllable and that they need to meet water temperature requirements of coho salmon. Data from Thermal Infrared Radar (TIR) clearly indicates that water depletion drives water pollution, yet information from that survey was not used to draw that conclusion in the Scott TMDL.



Figure 16. Sand-sized particles dominate this pool tail crest on the Scott River near Ft. Jones. Photo by Pat Higgins from KRIS Version 3.0.

2.5.3 Summary of Temperature Conditions: The charts of stream temperature presented in this section go back to only 1996 (with some mainstem Scott data back to 1995). KRIS contains USFS data from 1994 and 1995 for the mainstem Scott and tributaries in the West Canyon sub-basin. These data are important because they date before the January 1, 1997 flood, when many streams in the Scott basin torrented, widening channels and removing riparian vegetation. Comparing these data with 1997-2004 data would show if temperatures increased as a result of the 1997 flood. These data should be incorporated into the West Canyon and mainstem charts in this section of the TMDL. The data are available online, with a list of charts located at:

http://www.krisweb.com/krisklamathtrinity/krisdb/webbuilder/selecttopic_scott_river.htm

The source table for the 1994 USFS data is located at:

http://www.krisweb.com/krisklamathtrinity/krisdb/webbuilder/sc_cst5.htm

The source table for the 1995 USFS data is located at:

http://www.krisweb.com/krisklamathtrinity/krisdb/webbuilder/sc_cst8.htm

2.5.2 Temperature-Related Desired Conditions: Coho salmon represent the most sensitive beneficial use in the Scott River basin and the final Scott TMDL must recognize the findings of Welsh et al. (2001) and the recommendations of the U.S. EPA (2003) in establishing a floating weekly average temperature of 16.8 C or less in any habitat inhabited by coho juveniles. In order to attain these conditions, impacts from riparian zone timber harvest must be limited and the interval of damaging flood flows must be decreased. In fact, logging in the riparian zone of Scott River tributaries has been active (Figure 17).

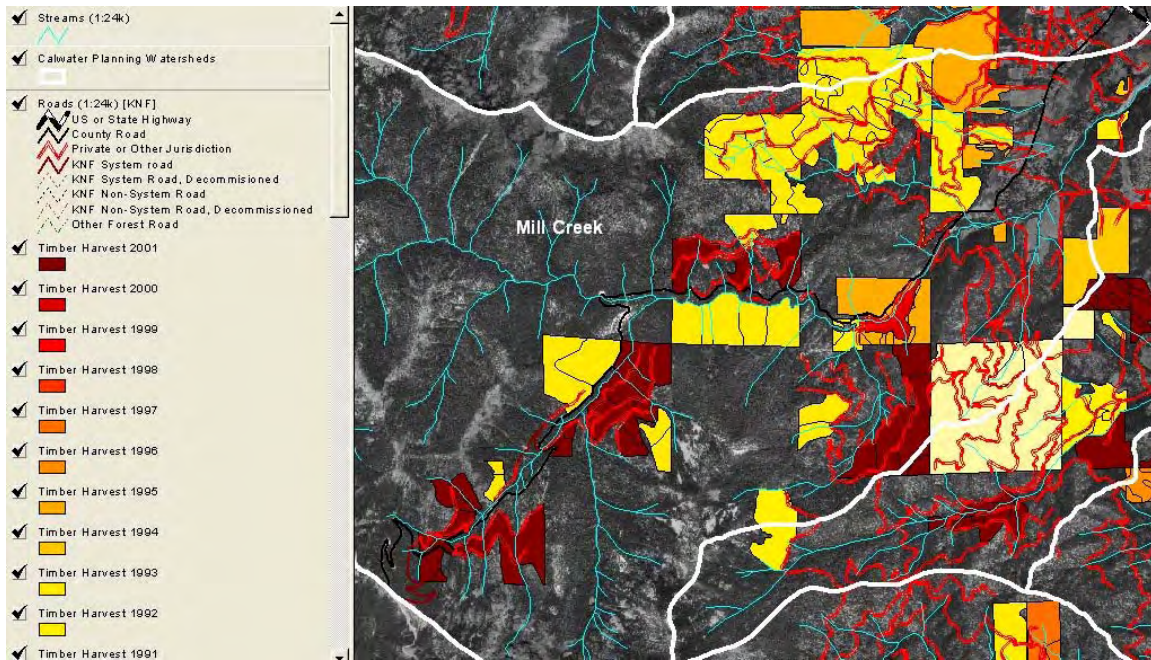


Figure 17. This map shows timber harvests on private land between 1991 and 2001, according to CDF, for the Mill Creek Calwater (upper Etna Creek). Timber harvest in recent years seems concentrated in near stream areas and other larger harvests overlap riparian zones.

Change scene detection data using 1994 and 1998 Landsat images (Levien et al, 2002) also show active timber harvest in riparian zones in recent years (Figure 18). Desired future watershed conditions should include riparian zones that approach the natural range of variability in size and height so that thermal buffering and large wood recruitment potential can be protected and improved. The TMDL needs to specifically recognize this problem so that RWB staff can prevent damage to core habitat areas and to provide for appropriate large wood recruitment. Riparian zones of headwater areas are often not delineated because the USGS 1:24000 stream maps are incomplete. Use of the SHALSTAB model will help highlight sensitive headwater swales, where logging may trigger failures and where natural landslides in unlogged areas may help recruit large wood to streams.

Desired future conditions for Scott River tributaries must also include sufficient flow to maintain water quality. The Watershed Sciences (2003) evaluation of water temperature problems in the Scott River shows an important relationship in Shackleford Creek (Figure 19). Shackleford Creek shows impacts of diversion as it goes from optimal for salmonids, to stressful or lethal for salmonids to a dry stream bed within a few miles.

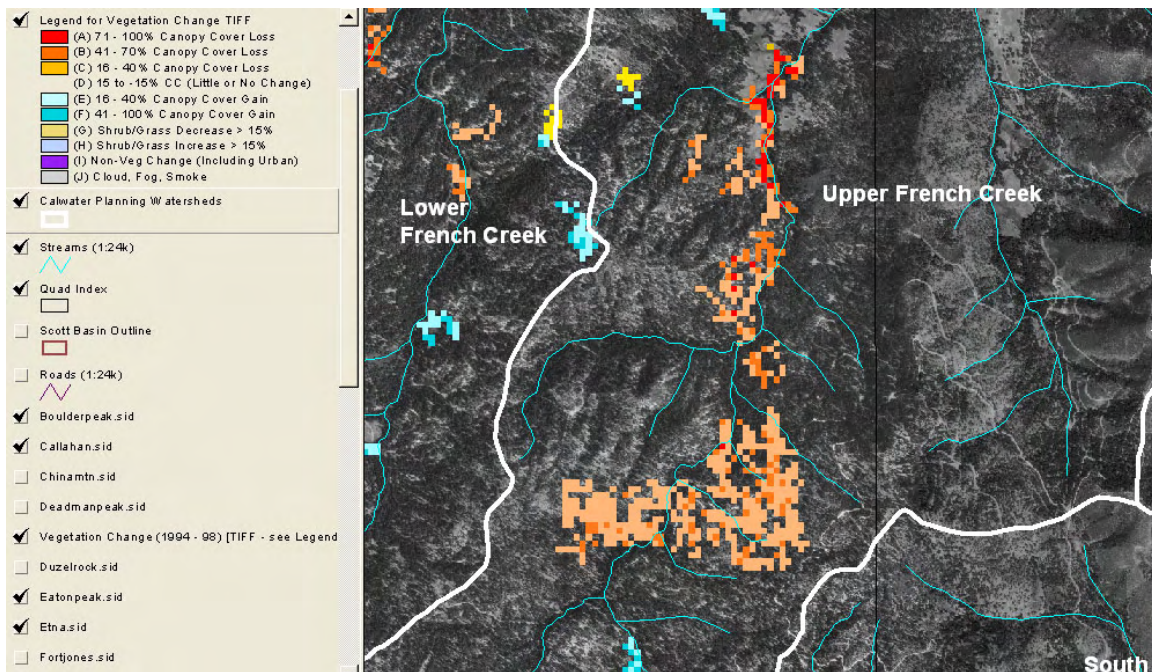


Figure 18. Vegetation change derived by comparing 1994 and 1998 Landsat images shows substantial decrease in canopy of reaches of lower French Creek. Data are from CDF and USFS Spatial Analysis Lab.



Figure 19. This map shows summary data of Scott River Thermal Infrared Radar (TIR) surveys for Shackleford Creek. Shackleford Creek flows northeast, then north to meet up with the mainstem Scott at the top of the figure. Note that temperature increases as flow is depleted. Missing temperatures (shown as grey reaches) indicates the stream is dry.

2.5.2.1 Effective Shade: The Scott TMDL states that “target shade conditions are those that result from achieving the natural mature vegetation conditions that occur along stream

channels in the watershed.” The TMDL then fails to note that timber harvests have been active in riparian zones, despite availability of USFS and CDF 1991-2002 timber harvest data.

2.5.2.2 Thermal Refugia: The Scott TMDL mentions cold water at creek mouths as being important as coldwater refugia, but fails to make important links in discussion. *EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards* (U.S. EPA, 2003) clearly states that the spatial distribution of refugia is critical to Pacific salmon survival, especially in circumstances where mainstem river temperatures are well over suitable. All refugia need to be identified and protected in the Scott TMDL and implementation should follow Bradbury et al. (1995) in protecting these areas as a priority and focusing restoration in restorable areas adjacent. Intensive management in the West Canyon TMDL sub-basin on Klamath National Forest lands prior to the 1997 storm caused massive landsliding, channel scour and significant elevation of water temperatures. The damage to salmonid carrying capacity was significant and future similar damage on low recurrence interval storms must be prevented, but the only way to do so is for the Scott TMDL to set limits of disturbance that minimize risk of cumulative watershed effects (see Chapter 5 comments below for recommended limits).

The Scott TMDL has a stated goal of “increased volume of thermally stratified pools.” While this is a laudable objective, pools are unlikely to become deeper and tend toward their natural range of variability of volume and depth if the landscape is not closer to its normal hydrologic range of variability due to early seral stage conditions and high road densities. Similarly, channels will tend to have reduced pool frequency below high risk landslide zones that are disturbed by timber harvest or road building.

Chapter 3: Sediment

3.2 Road Related Sediment Delivery

3.2.1 Two Estimates Made:

“Because this type of road inventory was not available in other subwatersheds, the rates estimated in the South Fork were extrapolated to the rest of the mountainous subbasins in the Scott River watershed.”

This extrapolation from the South Fork to the entire Scott basin required some assumptions. Based on comments on the pre-draft (Kier Associates, 2005b), information was added to the TMDL stating those assumptions. If only about 5.5 of 813 square miles of the watershed were surveyed, that is approximately only 0.6% of the watershed. This percentage should be stated in section 3.2.1.

3.2.2 Discrete Sediment Sources (Road Inventory and field-check):

The pre-draft of the TMDL noted that the field data collection in the South Fork found twice as many road-stream crossings than were contained in the GIS layers. Because of this, apparently the number of road-stream crossings in each of the rest of the sub-basins was doubled. Comments on the pre-draft (Kier Associates, 2005b) requested that if possible, some attempt should be made to determine if that is a valid assumption. Data from Klamath National Forest road surveys (mentioned on page 2-23) could provide a means to check the

accuracy of the 50% assumption. The RWB should determine the extent of the Scott River basin that has been surveyed by the USFS and compare the number of road/stream crossings identified in the USFS surveys in that area with the number of roads/stream crossings identified in that area from the GIS data.

In the public draft, the paragraph that mentions the doubling of road-stream crossing was removed and replaced with a new paragraph stating the Resources Management's (RM) SEDMODL estimate of stream crossings matched well with the RWB GIS estimate, so RM's estimate was used. Sediment calculations do not appeared to have changed. This situation is unclear and confusing.

This section also states that:

“In the RM South Fork road survey, the largest contributing features were all located within a single quarter-mile-long section of failing road. These few features accounted for 75 percent of the total contribution from road failures. Thus, these features are anomalous in context. For that reason they were not included in the group that was used to calculate the rates used to extrapolate to the South Fork watershed but instead were combined and treated separately as a single discrete feature added to the South Fork Subwatershed sediment summary.” (p 3-8)

While the RWB staff likely made the most correct decision possible under the circumstances, this fact points out the uncertainty in extrapolating from one sub-basin to the entire basin. Given that only approximately 0.6% of Scott basin was surveyed (see calculations above in comments on 3.2.2), and these large features were found, there are almost certainly “anomalous” major features in other areas of the Scott basin. By not including those “anomalous” features, the RWB has likely skewed its estimate of road-related sediment production low, perhaps substantially. In response to comments on the pre-draft TMDL, RWB staff added the following acknowledgement:

“So we may have underestimated anthropogenic sediment contributions. Sediment source inventory may be slightly underestimated because some anomalous features that were not large enough to be found on the landslide analysis may have not been counted.” (p 3-11).

This may run counter to the RWB's directive (Clean Water Act, Section 303(d) and the associated regulations at 40 CFR §130.7) to include a margin of safety in the TMDL, and hence should be stated in discussions of the margin of safety in section 3.5.4.

3.4.2 Streamside Mass Wasting and Erosion Features - Stratified Random Sampling:

In response to comments on the pre-draft (Kier Associates, 2005b), language was added to this section of the TMDL stating that 21 of the approximately 2500 total miles of streams in the Scott watershed were sampled, which is approximately 0.8 percent. Any embedded assumptions should be stated. For instance, this analysis assumes does not take into account differences in watershed disturbance regimes between watersheds.

Chapter 4: Temperature

4.1.1 Temperature Sources: Stream Heating Processes: Scott TMDL discussions of temperature pollution do not reflect a current “best science” understanding of riparian conditions, air flow over the stream and their relationship to water temperature. The final document needs to reference Bartholow (1989), Essig (1998) and Poole and Berman (2001). Bartholow (1989) demonstrated that air temperature over the stream is by far the most significant driver of maximum water temperature (Figure 19).

Poole and Berman (2001) describe the relationship between riparian conditions and microclimate over the stream, which can have a major influence on water temperature in smaller upland tributaries. For example, forest harvest back from the area where direct shade is provided to the stream may open air flow and allow more heat exchange with the water. This presents a potential problem in the Scott River basin Westside tributaries, where such shifts that could eliminate coho habitat without changing the shade.

The TMDL for temperature in Idaho (Essig, 1998) recognized the water temperature air temperature relationship presented by Bartholow (1989). The Scott TMDL model runs mention that microclimatic effects were considered, but the description of model parameters and assumptions is lacking.

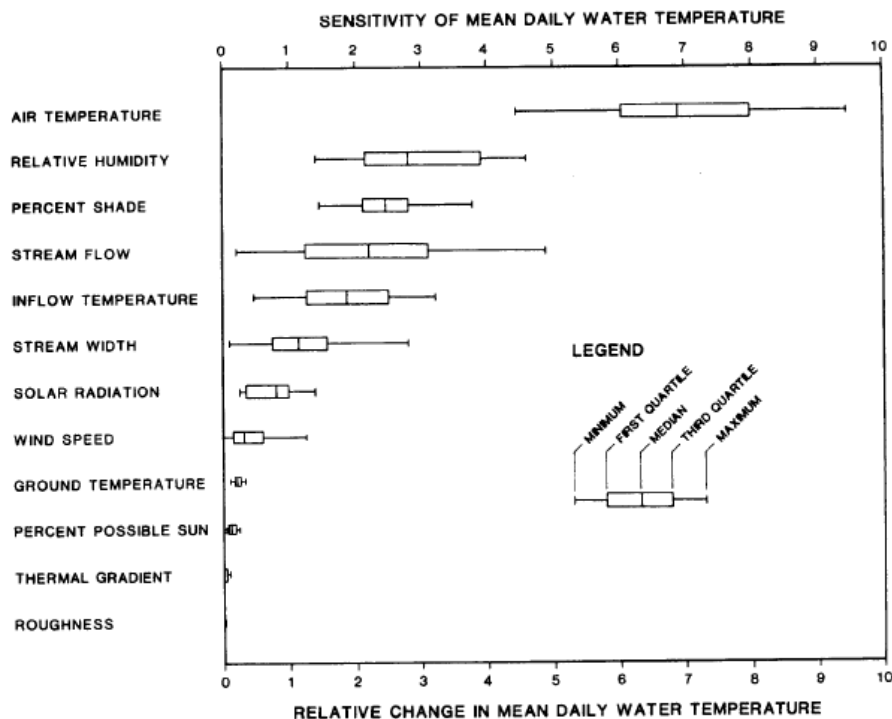


Figure 19. This chart from Bartholow (1989) shows that air temperature and relative humidity have a greater effect on mean daily water temperature than shade.

Science associated with the Northwest Forest Plan (FEMAT, 1993) indicates that the zone of riparian influence is two site potential tree heights or more (Figure 20). Water temperature

buffering, in the form of cool air temperatures and high humidity over the stream, rapidly deteriorates under one site potential tree height protection (Chen, 1991). As mentioned in discussion of section 2.5.2.1, timber harvest has been active in riparian zones in the Scott River basin, which is decreasing desired conditions for optimum temperature buffer potential. The Scott TMDL states that the timber harvest permit process under CDF's jurisdiction will prevent future riparian damage despite previous studies (Ligon et al., 1999) and experience in the Scott River basin show that that process has not worked previously in this regard. The discussion in the Scott TMDL of modeling of riparian shade included the following: "Our analysis of factors affecting stream temperatures has determined that reductions of stream shade cause increases in stream temperature. Therefore, the California Forest Practice Rules do not ensure that water quality objectives set in the Basin Plan will be met." (p. 4-35)

Page 4-38 states that, "The load allocations for this TMDL are the shade provided by topography and potential vegetation conditions at a site with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire, and is approximated as adjusted potential shade conditions as described in Section 4.4.1" This statement from the Scott TMDL infers that where topographic exists, retention of trees for shade might be decreased during timber harvests. This ignores the effects of riparian timber harvest on large wood recruitment and the implications for aquatic habitat.

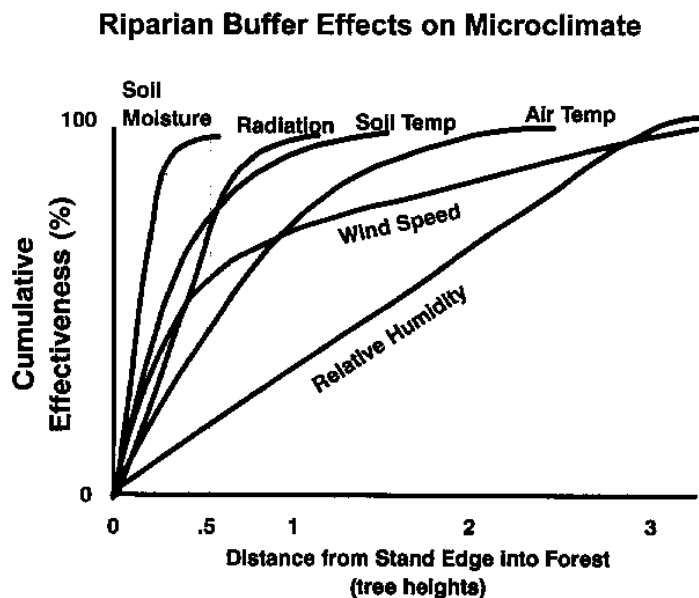


Figure 20. This figure taken from Chen (1991) shows how various riparian functions important to streams deteriorate as disturbance encroaches into stream side areas. One site potential tree height is likely 150-180 feet in Scott River basin forested areas.

4.1.2.2 Stream Heating Processes Affected by Human Activities in the Scott River Watershed:

The Groundwater section of the Scott TMDL on page 4-4 to 4-5 states:

“The only readily available data that provide a glimpse of recent groundwater conditions are water table measurements at five wells in Scott Valley. Analysis of these data shows that in general drawdown is greater in dry years. The water table measurements for one of the wells are presented in Figure 4.1.”

Comments submitted by Quartz Valley Indian Community (2005) to the Scott River Watershed Council contain a map and graphs for each of the five Scott Valley monitoring wells (included here as Appendix A). The graphs show the annual minimum and maximum measurements at each well, along with annual precipitation at the Fort Jones rain gage. The charts suggest that while annual maximum levels have remained relatively constant over time (fluctuating with precipitation), annual minimum levels have declined since 1965 (though they fluctuate with precipitation). Comments on the pre-draft (QVIC, 2005b) requested that the RWB consider including these graphs and map in the TMDL. RWB staff responded verbally that in their opinion the wells were not strategically placed, do not represent overall conditions in the valley, and hence do not support the suggestion above that annual minimum levels appear to be dropping. Graphs for the five wells should be included in the TMDL, or written justification provided as to why they were not utilized.

4.3.1.7 Results and Discussion: This section discusses the results of modeling scenarios. The combined scenarios included combinations of changes to individual factors such shade, groundwater accretion, surface diversions, and channel geometry. In the pre-draft, no figure was included showing the results of combined scenarios. As a result of comments on the pre-draft (Kier Associates, 2005), figure 4.17 was included in the public draft TMDL. It indicates that with potential riparian shade and a 50% increase in groundwater accretion, temperatures could be reduced approximately 5 to 7 degrees C in most of the Scott Valley and in the upper section of the Scott Canyon, with almost the entire Scott Valley being under 22 degrees C.

4.3.2.1 Boundary Conditions: This section contains a typo. The reference to Figure 4.18 should be a reference to Figure 4.19 instead. The reference to Figure 4.19 should be a reference to Figure 4.20 instead.

4.3.2.7 Results and Discussion: This section contains a typo. The reference to Figure 4.20 should be a reference to Figure 4.21 instead.

4.5.2 Synthesis: Scott River Tributaries: This section provides important recognition that forest management activities caused debris flows that damaged channels and riparian vegetation in Scott River tributaries, negatively impacting water temperatures.

4.6 Recommendations for Additional Study and Future Action: Changes suggested in pre-draft comments (QVIC, 2005) about the wording of regarding riparian grazing workshops were made.

Chapter 5: Implementation

The RWB has an obligation to make sure that the water quality objectives are met, and beneficial uses restored and protected, particularly because the final Scott TMDL Action

Plan will be amended to the Basin Plan (RWB, 2003). If there are multiple ways to meet the objectives, we support giving landowners the flexibility to decide how they want to meet those objectives. For example, if other regulatory and policy processes such as the Scott Incidental Take Permit (SRCD, In Draft), Coho Recovery Plan (CDFG, 2004), and Timber Harvest Plans will result in the attainment of water quality objectives, then further regulation by the RWB is not necessary.

Duplicative and overlapping regulation benefits no one. Unfortunately, these other processes rely almost wholly on voluntary measures that neither guarantee that water quality problems will be remedied nor that TMDL objectives will be achieved. When other policy approaches and voluntary landowner actions fail to achieve the TMDL objectives, then the RWB must use its considerable regulatory and enforcement authority to take necessary actions to ensure results.

The implementation actions requested in these comments are summarized below as Table 1 (a revised version of Table 4 from the proposed Scott TMDL Basin Plan amendment language).

5.1.1.1 Prioritization of Implementation Actions

This section has been added since the pre-draft, likely in response to the Tribes comments on the pre-draft (Kier Associates 2005b). The statement “Where reaches of the Scott River and its tributaries are providing suitable freshwater salmonid habitat, protection of these areas should be a priority for restoration efforts.” (p 5-4) is somewhat helpful, but could be improved by specifically mentioning coho salmon and their coldwater refugia needs.

The final Scott TMDL should follow the approach of Bradbury et al. (1995), which is to identify the most intact habitat patches and to begin restoration by making sure that these areas are protected and enhanced as a top priority. In the Scott River basin, these would be the stream reaches with coho salmon (Figure 1) or those that provide coldwater refugia for other Pacific salmon species. As we indicated above, many surveys have been conducted in recent years to identify locations where coho salmon spawn (Quigley, 2005, Maurer, 2002; Maurer, 2003; SRCD, 2004). RWB staff will need to prevent timber harvest in riparian zones or sensitive headwater areas through its authority to condition waste discharge requirements on timber harvest plans and the final Scott TMDL should explicitly articulate that need and action. The protection of refugia and the restoration of water quality will also require protecting and restoring tributary stream flows.

5.1.7 Implementation Actions to Address Water Temperature and Vegetation that Provides Shade to the Water Bodies: In order for TMDL implementation to succeed it is important that the RWB (and other agencies and stakeholders) not suffer from “tunnel vision”, but instead view the watershed in a system-wide, holistic fashion with its attendant complexities and interrelationships. The RWB’s primary concern is protection and restoration of water quality, but the restoration of water quality can only succeed in the context of a broader ecological recovery effort. For example, if low recurrence interval storm events continue to cause channel damage that triggers elevated water temperatures and takes decades to recover, then success of the Scott TMDL implementation will be confounded.

Alterations in stream channel morphology are a source of sediment and temperature problems in the Scott River and its tributaries. Factors likely contributing to these alterations include increased sediment supply and increased peak flows (i.e., from upslope watershed disturbance), overgrazing, and a variety of flood control efforts including riparian vegetation removal, channel straightening, levee construction, and the placement of riprap. The Scott TMDL does a fairly good job of outlining the effects of these various watershed processes except for the risk of increased flows due to rain on snow events.

While the RWB's authority may be confined, that should not prevent it from fostering a long-term vision of what a restored Scott basin could look like. Appendix A of the draft TMDL includes historic channel and riparian condition descriptions that can guide efforts toward desired future conditions. While the technical portion of the TMDL sets gallery cottonwood forest as the "potential" vegetation for much of the Scott Valley, the proposed draft implementation plan needs to define the steps necessary to achieve that potential.

Appendix A provides a good discussion of the ecology and management of various riparian tree species present in the Scott Valley. The information presented on black cottonwood suggests that while Scott Valley historically provided excellent habitat for cottonwoods, the cottonwood population has declined dramatically over the 20th century. Key reasons include clearing of riparian vegetation, channelization, and lowering of the ground water table.

Restoring channel processes, including giving the river room to meander through multiple channels, is key to the restoration of stream temperatures and aquatic habitat complexity in the Scott River and its tributaries. Absent restoring a sinuous and meandering channel, the re-establishment of cottonwood gallery forests throughout the Scott Valley may not be possible. Establishing a cottonwood forest would have major benefits for water temperatures and channel processes and achievement of TMDL objectives (see discussion under 5.1.9 below).

5.1.9 Flood Control and Bank Stabilization Implementation Actions

Much of the riprap and levees built along the mainstem Scott River were publicly funded through the U.S. Soil Conservation Service (now Natural Resources Conservation Service) and the U.S. Army Corps of Engineers. As noted on page 5-17 of the TMDL, "The Corps and the NRCS do not retain jurisdiction or ownership over these levees and flood control structures." It is likely that with the passage of time and the occurrence of floods that these structures will weaken and eventually fail. Failure may happen piecemeal or all at once, but eventual failure is inevitable.

It is unlikely that individual landowners will have the resources with which to repair these structures. The state and federal governments are not likely to provide the resources to maintain the Scott Valley's levee system. The Scott TMDL should recommend that future levee repairs have as a goal creation of a more sinuous channel with added cottonwood and willow trees to meet both long term flood control objectives and the water quality objectives of the TMDL.

Given the degraded state of riparian vegetation in the Scott River basin, we would urge the RWB to use its Clean Water Act Section 401 authority to ensure that bank stabilization projects conducted in the Scott basin incorporate riparian planting, and that no rock-only bank stabilization projects are permitted.

The Scott TMDL needs to specifically address actions that are recommended and those that the RWB staff would oppose when future large floods cause extensive riparian damage similar to January 1997. After the 1997 flood, federal emergency funds were used to clear and straighten channels, with damaging impacts on the channels and their riparian vegetation (Kier Associates, 1999) and recurrence of this pattern of action must not be allowed. Possible alternative flood-control scenarios include setting levees back on the floodplain away from the active channel, providing the river with some space to meander within levees.

As noted on page 5-18, it is possible to stabilize banks, without having a detrimental effect on stream temperatures, by incorporating vegetation into bank stabilization design. An innovative technique that may have application in the Scott Valley was developed in Anderson Creek, a tributary to the Navarro River in western Mendocino County, by Chris Tebbutt (IFR, 2003).

During a large flood in 1983, the channel at Mr. Tebbutt's property went from about 100 feet in width to over 800 feet, washing away valuable farmland and leaving a wide, warm and open reach of creek. Shortly after this erosional event, wing deflectors with boulders were installed and trees were planted behind the deflectors. These provided mass to turn the energy of the river at much less cost than boulders.

The deep planting of cottonwoods accelerated the trees' growth. The sections both above and below the Tebbutt property have now been treated and the channel was approaching its pre-disturbance width in 2003. Riparian vegetation is trapping sediment and building new streambanks. Stratification of deep pools formed off structures provide rare summer juvenile salmonid rearing habitat. While Anderson Creek is not quite as large as the Scott River, it does have substantial stream power and bioengineering methods used are likely transferable. A description of the Anderson Creek projects, with before, during, and after photographs is available online by viewing the "Restoration Tebbutt's" photo tours topics at: http://www.krisweb.com/krisnavarro/krisdb/webbuilder/selecttopic_tour.htm A selection of photographs is included here as Figures 20-22.

The Scott TMDL and Kier Associates (1999) point out that many miles of mainstem Scott River riparian zones have cattle exclusion fencing and many reaches have also been tree planting project sites. The resulting narrow leave strips may not be sufficient to assure riparian function and protection of agricultural land from flood damage (Kier Associates, 1999). Another possible avenue for riparian restoration would be the use of conservation easements, which typically involve compensation to the landowner in exchange for long-term restrictions on the use of their property. With conservation easements, landowners would reduce agricultural activities in areas near stream channels, facilitating riparian restoration and reducing flooding of agricultural land.

The final Scott TMDL should recommend the use of computer modeling software to involve the community in the creation of positive future scenarios that allow for both conservation and a thriving agricultural economy. Software like CommunityViz and Ecomodeler can be employed to show both ecological and economic scenarios. These could be used, for example, to explain why it is in the landowners' interest to negotiate the acquisition of riparian easements on the mainstem Scott River in Scott Valley.



1984

Figure 20. This photo shows Chris Tebbutt deep planting cottonwood and willows in 1984. The dark branches at the left are fence post-sized black willows. Photo by Chris Tebbutt.



1986

Figure 21. Two years later the outside curve of Anderson Creek on the Tebbutt property is unprotected but the trees are growing. The stream channel in 1986 shifted into the planted areas. Photo by Chris Tebbutt.



2001

Figure 22. Cottonwoods, willows and alders line both banks of Anderson Creek in this photo taken looking upstream on the Tebbutt property in spring 2001. Many trees at the left of the photo are actually rooted in vegetated hard points with massive rock structures. The deep planting of cottonwoods was used on both sides of the creek. Photo by Chris Tebbutt.

5.1.8.2 Water Use Implementation Actions: Many previous studies (CH2M Hill, 1985; Kier Associates, 1991 and 1999) described flow depletion and the loss of coldwater fisheries in the Scott River basin and recognize that recovery of salmon and water quality will not succeed without solutions to problems involving water rights, water use and groundwater pumping.

Long-term USGS flow records show clearly that base flows in the Scott River have diminished (Figure 23). Reduced flows result from increased surface diversions, changes in cropping patterns, decreased base flows due to changes in upland conditions, decreased available surface water due to aggradation, and increased groundwater pumping.

The final TMDL should explicitly recognize that the flow trends of recent years are precisely the opposite of those necessary for the recovery of water quality and fish resources. Remedies for flow changes related to watershed conditions and aggradation have been described in previous sections. The final TMDL needs to also recommend that changes in crops from water-hungry alfalfa to high-value dry-farmed species be considered and that implementation of available water conservation measures be instituted by a date certain.

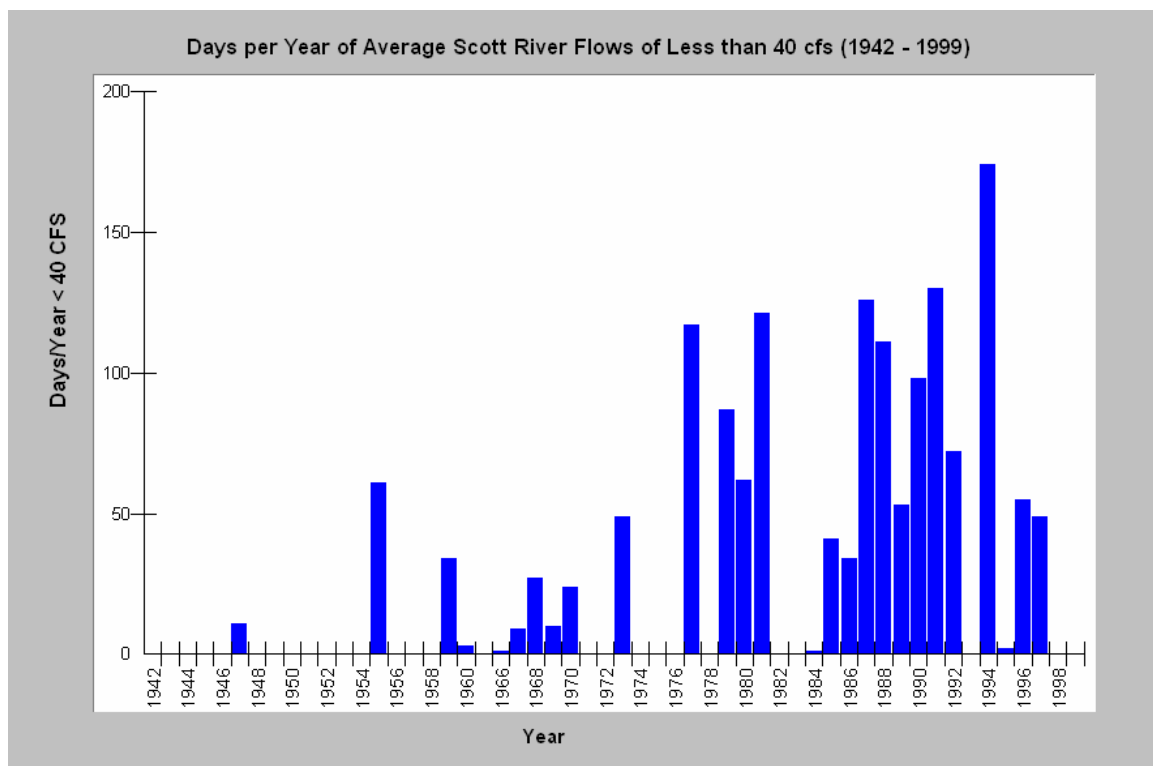


Figure 23. USGS flow data for the Scott River were used to create the above chart showing an increase in the days with less than 40 cubic feet per second at Fort Jones with a major increase over the period of record.

The final Scott TMDL needs to call for the RWB to exert authority in cases such as Shackleford Creek (Figure 19) where the depletion of flows makes achievement of water quality objectives impossible. The State Water Resources Control Board has the authority to require increased bypass flows to meet water quality standards as established in Supreme

Court case No. 92-1911 (*Jefferson County PUD and City of Tacoma vs. Washington Dept. of Ecology*, see <http://chrome.law.cornell.edu/supct/html/92-1911.ZD.html>). This case explicitly states that water quality regulatory agencies can, under the Clean Water Act, require bypass flows to achieve water quality protection purposes – that, as has been demonstrated so many times, the management of water quality and water quantity are inseparable:

“Petitioners also assert more generally that the Clean Water Act is only concerned with water ‘quality,’ and does not allow the regulation of water ‘quantity.’ This is an artificial distinction. In many cases, water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery. In any event, there is recognition in the Clean Water Act itself that reduced stream flow, i.e., diminishment of water quantity, can constitute water pollution. First, the Act's definition of pollution as “the man made or man induced alteration of the chemical, physical, biological, and radiological integrity of water” encompasses the effects of reduced water quantity. 33 U.S.C. § 1362(19). This broad conception of pollution – one which expressly evinces Congress' concern with the physical and biological integrity of water – refutes petitioners' assertion that the Act draws a sharp distinction between the regulation of water “quantity” and water “quality.” Moreover, §304 of the Act expressly recognizes that water “pollution” may result from “changes in the movement, flow, or circulation of any navigable waters . . . including changes caused by the construction of dams.” 33 U.S.C. § 1314(f). This concern with the flowage effects of dams and other diversions is also embodied in the EPA regulations, which expressly require existing dams to be operated to attain designated uses. 40 CFR § 131.10(g)(4).”

Figure 4.13 indicates that water temperatures in the mainstem Scott are highly influenced by groundwater accretion. Based on Figure 4.13 and other modeling results presented in the Scott TMDL, it is apparent that water temperature problems cannot be fully resolved without appropriate action taken to limit ground water pumping. The Scott TMDL changed recommendations for a State Water Resources Control Board Water Rights Division groundwater study to one overseen by the County of Siskiyou.

The RWB should consider, in the alternative, recommending that the California Department of Water Resources conduct the necessary groundwater study because they have previously studied Scott Valley groundwater conditions, the Department has staff with the appropriate credentials for conducting such a study, and they enjoy a degree of trust with Scott Valley residents, having served their water resource study needs over the years.

There is already enough evidence to show that groundwater pumping is likely causing deleterious effects to both surface water quantity and quality (see Appendix A of this comments document). Department of Water Resources data indicate that the installation of wells has continued and suggest that postponing discussions and action on this critical issue is unwise. A prompt groundwater study carried out by qualified scientists will provide information on what needs to be done to remedy the problem.

If the final Scott TMDL continues to recommend a local lead role for the groundwater study, the Quartz Valley Indian Reservation should also be named as a specific party to the

study. Page 5-16 of the TMDL states that “The Regional Water Board requests that the County of Siskiyou, in cooperation with the Siskiyou Resource Conservation District (SRCD) and other appropriate stakeholders, conduct the above mentioned study.” That statement should be revised to read “The Regional Water Board requests that the County of Siskiyou, in cooperation with the Quartz Valley Indian Reservation (QVIR), Siskiyou Resource Conservation District (SRCD), and other appropriate stakeholders, conduct the above mentioned study.” It is important to note that Tribes are not stakeholders, per se; they are sovereign nations with a unique status.

We recommend the re-insertion of the language that was included in the pre-draft TMDL, but removed from the public draft, recommending that the State Water Board and its Division of Water Rights “take the findings of the research into consideration and act accordingly to protect and restore the instream beneficial uses of the Scott River and its tributaries, with particular focus on those beneficial uses associated with the cold water fishery.” We recognize that the RWB has the authority to make this request regardless of what language is included in, or excluded from, the TMDL and we would expect that as changes in groundwater management are found to be necessary to protect and restore the beneficial uses of the Scott River that the RWB would, as required by the Clean Water Act, make such a request.

5.1.1 Road and Sediment Waste Discharge Implementation Actions for Individual Responsible Parties: The final Scott TMDL should set quantitative limits on allowable road densities in each watershed (see comments in section 2.4.1, 2.4.3.2, and 2.4.3.5 above). If the RWB does not have adequate information on which to base such a limit, studies should be conducted to determine what an appropriate value would be. See Table 1 for a list of suggested targets for watershed condition with references on which they are based. Also, a requirement should be imposed on the USFS and private timber companies that roads that cannot be annually maintained must be fully decommissioned (see comments on section 2.2.2.3 above) similar to that included in the Redwood Creek TMDL (U.S. EPA, 1998b).

Multiple road crossings on Scott River tributaries failed in the January 1997 storm resulting in extensive channel scour and increase in stream temperatures (de la Fuente and Elder, 1998). The final Scott TMDL needs to set targets for stream crossings similar to Armentrout et al. (1999) and such standards should be enforced by RWB staff using their waste discharge authority during the timber harvest plan review process.

Roads data from Klamath National Forest show that some roads crossing lower Scott River tributaries have been decommissioned. Similar decommissioning is needed for roads on private lands. Roads crossing stream reaches that have a history of torrenting should have concrete fords, not culverts, similar to those installed by KNF after the 1997 storm (Kier Associates, 1999). The final TMDL needs to recognize sensitive headwater areas and the need to prevent road construction in areas shown to have a high risk of land-sliding through the use of the SHALSTAB model, unless a professional geologist makes a finding that there is no risk of failure.

5.1.8 Timber Implementation Actions for Private and Public Responsible Parties: The final Scott TMDL should set quantitative limits on the percentage of a watershed that can be harvested in a given time frame (Reeves et al., 1993). If the RWB does not have adequate

information upon which to base such a limit, studies should be conducted to determine what an appropriate value would be. For more information on this subject, see comments on section 2.4.3.5 above.

The lack of forest growth indicated by Landsat change scene and vegetation data (see discussions in Chapter 2 above) shows a clear need to restrict forest harvest in the rain on snow zone until stands previously disturbed are in a more mature condition to lessen the risk of rain on snow events. RWB staff need to limit canopy reduction on lands lying between 3,500 and 5,000 feet in elevation using its waste discharge requirement-setting authority during the timber harvest plan review process. Similarly, RWB staff should flag for geologic review any timber harvest on areas shown to be at a high risk for failure through SHALSTAB modeling (see Chapter 2 discussions).

5.1.9 Implementation Actions for the United States Forest Service

As recommended in section 2.4.3.5 above, the final Scott TMDL should set quantitative limits on the percentage of a watershed that can be harvested in a given time frame. The findings of de la Fuente and Elder (1998) indicate that the current BMPs applied on USFS lands have been insufficient to prevent cumulative watershed effects and increased restrictions on activity are needed. Also, maximum allowable road densities should be set as recommended in section 5.1.1 above.

Table 2. Recommended targets for watershed condition.

Parameter	Upland Target Conditions	References
Road Densities	<2.5 mi./sq. mi.	USFS (1996), NMFS (1995), Armentrout, (1998)
Road-Stream Crossings	<2 road crossings per mile of stream	Armentrout et al. (1998)
Timber Harvest	<25% of a watershed in 30 years	Reeves et al. (1993)
Unstable areas	No disturbance in SHALSTAB high risk zones w/o geologic review	Dietrich et al. (1998)

Chapter 6: Monitoring

There is enough information available to RWB staff to make specific recommendations for trend monitoring in the final Scott TMDL as required by Section 13242 of the California Water Code. The final Scott TMDL also needs to specifically state that all data used for monitoring and assessment under TMDL implementation should be available as raw data, which is necessary for a transparent scientific process. Although time frames for recovery may be difficult to define exactly, the final Scott TMDL needs to establish an expected time line for recovery that can be amended through adaptive management during the implementation phase. The Scott TMDL must also specify that all data collected as part of TMDL monitoring should be added to an easily accessible electronic database.

In Stream Monitoring Methods and Locations: The draft Scott TMDL defines several targets for in stream conditions that are appropriate tools for discerning trends and abating water quality problems, but we recommend the addition of other cost-effective tools that have been widely employed in previous TMDLs or by the USFS. The Scott River basin is already data rich and continuing to collect data for trend monitoring of a similar type in the same or similar locations is both logical and practical. Table 3 shows recommended tools and locations for monitoring both sediment and water temperature. Additional details are include in discussions on section 2.4.2 above.

Table 3. Recommended TMDL Implementation Trend Monitoring Methods and Locations

Method	Reference	Location
Benthic Macroinvertebrates	Harrington and Born (1999)	Repeat at previously monitored locations every five years or after major storm event
Large Woody Debris	Schuett-Hames et al. (1999)	Coho salmon tributaries lower than fourth order
Embeddedness	CDFG (1998)	All stream sizes. Not necessary if more quantitative fine sediment data are collected.
Pool Distribution and Depth	US EPA (1998b)	Use habitat typing data or directly measure pool depths to gauge trends in all sizes of streams
Percent fines (<0.85 mm, 6.4 mm)	Scott TMDL	Same locations as Sommarstrom et al. (1989) but add tributary locations where fine sediments are a problem or to gauge trends after restoration
Cross Sections and Longitudinal Profiles	Madej (2001)	Lower mainstem Scott River
Volume of Sediment in Pools (V*)	Lisle and Hilton (1992) and Knopp (1993)	Continue monitoring at French Creek stations but also use in other streams of appropriate gradient and confinement with sediment problems to gauge trends in response to land management changes or restoration
Median Particle Size (D50)	Knopp (1993), Gallo (2002) and Reynolds (2001)	
Turbidity	Klein (2004)	Moffett Creek and mainstem Scott above and below
Water Temperature	Welsh et al. (2001)	Continue monitoring at previously sampled locations

Data Transparency: The RWB staff must require that all trend monitoring data related to TMDL implementation and abatement of water quality problems be supplied in raw form in order to maintain scientific validity (Collison et al., 2003). Although some Scott River stakeholders have held the position that data collected on private land is proprietary, RWB

staff can require data sharing as part of waste discharge monitoring related to timber harvest review, or other permitting actions.

Data Storage and Management: In order to facilitate participation of Tribes and the public in Scott TMDL implementation, it is desirable to have a central data repository. One such existing database is the Klamath Resource Information System or KRIS (see www.krisweb.com), which is now has been in use in the Klamath and Trinity River basins since 1998. KRIS is an optimal data management tool because its cloning function allows easy generation of new charts when new data are added. KRIS content can be shared via the Internet as attached files with anyone having a current version of KRIS installed on their computer. KRIS also captures reports and metadata, providing a means to share data in its full context, reducing the risk of the data be inappropriately used.

Time Frame for Recovery: Biological response to restoration actions may takes several life cycles, while physical stream habitat may respond more quickly (Spence et al., 1996). Both V* results and fine sediment measurements in French Creek indicate that road-related erosion prevention has resulted in improved water quality conditions. Consequently, trends in physical habitat should be checked within five years and if no response is detected within ten years, a change in management practices should implemented.

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Roads & Sediment Waste Discharges	<ul style="list-style-type: none"> Parties Responsible for Roads and Sediment Waste Discharge Sites. Regional Water Board. 	<ul style="list-style-type: none"> The Regional Water Board encourages parties responsible for roads and sediment waste discharge sites to take actions necessary to prevent, minimize, and control road-caused sediment waste discharges. Such actions may include the inventory, prioritization, control, monitoring, and adaptive management of sediment waste discharge sites and proper road inspection and maintenance. The Regional Water Board's Executive Officer shall require parties responsible for roads, on an as-needed, site-specific basis, to develop and submit an Erosion Control Plan and a Monitoring Plan. An Erosion Control Plan shall describe, in detail, sediment waste discharge sites and how and when those sites are to be controlled. By [insert date that is 2 years from the date of U.S. EPA approval], criteria shall be developed for determining when an Erosion Control Plan shall be required, although nothing precludes the Executive Officer from requiring Erosion Control Plans prior to this date. Should discharges or threatened discharges of sediment waste that could negatively affect the quality of waters of the State be identified in an Erosion Control Plan or by other means, dischargers shall be required to implement their Erosion Control Plan and monitor sediment waste discharge sites through appropriate permitting or enforcement actions 	<ul style="list-style-type: none"> <i>Road densities need to be reduced to no more than 2.5 mi./sq. mi. per USFS (1996) and NMFS (1995) to reduce sediment and potential for damaging elevated peak flows. Priority for action needs to target coho salmon sub-basins or streams providing refugia.</i> <i>Reduce road networks to those that can be annually maintained and make sure that decommissioned roads require no maintenance (U.S. EPA, 1998).</i> <i>All major land owners should be required to participate in Erosion Control and Monitoring Plans.</i> <i>Trend monitoring data need to be specified showing aquatic recovery companion with mitigation and restoration measures and additional abatement actions taken if targets are not met within a specific time period.</i> <i>Prevent winter use of native surface logging roads due to discharges of fine sediment from truck traffic wearing down road beds (Collison et al., 2003).</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Roads	<ul style="list-style-type: none"> California Department of Transportation (Caltrans). Regional Water Board. 	<ul style="list-style-type: none"> Regional Water Board staff shall evaluate the effects of Caltrans' state-wide NPDES permit, storm water permit, and waste discharge requirements (collectively known as the Caltrans Storm Water Program) by [insert date that is 2 years from the date of U.S. EPA approval]. The evaluation shall determine the adequacy and effectiveness of the Caltrans Storm Water Program in preventing, reducing, and controlling sediment waste discharges and elevated water temperatures in the North Coast Region, including the Scott River watershed. If Regional Water Board staff find that the Caltrans Storm Water Program is not adequate and effective, Regional Water Board staff shall develop specific requirements, for State Water Board consideration, to be incorporated into the Caltrans Storm Water Program at the earliest opportunity, or the Regional Water Board shall take other appropriate permitting or enforcement actions. 	<i>Proposed action sufficient.</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Roads	<ul style="list-style-type: none"> • County of Siskiyou (County). • Regional Water Board. 	<ul style="list-style-type: none"> • The Regional Water Board and the County shall work together to draft and finalize a Memorandum of Understanding (MOU) to address county roads in the Scott River watershed. The MOU shall be drafted and ready for consideration by the appropriate decision-making body(ies) of the County by [insert date that is 2 years from the date of U.S. EPA approval]. The MOU shall include the following contents: <ol style="list-style-type: none"> 1. A date for the initiation and completion of an inventory of all sediment waste discharge sites caused by county roads within the Scott River watershed, which can be done with assistance from the Five Counties Salmonid Conservation Program. 2. A date for the completion of a priority list of sediment waste discharge sites. 3. A date for the completion of a schedule for the repair and control of sediment waste discharge sites. 4. A date for the completion of a document describing the sediment control practices to be implemented by the County to repair and control sediment waste discharge sites, which can be done with assistance from the Five Counties Salmonid Conservation Program. 5. A description of the sediment control practices, maintenance practices, and other management measures to be implemented by the County to prevent future sediment waste discharges, which can be done with assistance from the Five Counties Salmonid Conservation Program. 6. A monitoring plan to ensure that the sediment control practices are implemented as proposed and effective at controlling discharges of sediment waste. <p>A commitment by the County to complete the inventory, develop the priority list, develop and implement the schedule, develop and implement sediment control practices, implement the monitoring plan, and conduct adaptive management.</p>	<i>Proposed action sufficient.</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Grading	<ul style="list-style-type: none"> County of Siskiyou (County). Regional Water Board 	<ul style="list-style-type: none"> The Regional Water Board encourages the County to develop a comprehensive ordinance addressing roads, land disturbance activities, and grading activities outside of subdivisions in the Scott River watershed by [insert date that is 1 year from the date of U.S. EPA approval]. The ordinance may be specific to the Scott River watershed or county-wide in scope. 	<i>Proposed action sufficient.</i>
Dredge Mining	<ul style="list-style-type: none"> Regional Water Board. 	<ul style="list-style-type: none"> Regional Water Board staff shall investigate the impact of suction dredge mining activities on sediment and temperature loads in the Scott River watershed by [insert date that is 3 years from the date of U.S. EPA approval]. If Regional Water Board staff find that dredge mining activities are discharging deleterious sediment waste and/or resulting in elevated water temperatures, staff shall propose, for Board consideration, the regulation of such discharges through appropriate permitting or enforcement actions. 	<p><i>Proposed actions appropriate with the following addition:</i></p> <ul style="list-style-type: none"> <i>If there is a substantial increase in mining activity (i.e. due to increase in price of gold), Regional Water Board staff will accelerate timeline for completion of study.</i>

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Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Temperature & Vegetation	<ul style="list-style-type: none"> Parties Responsible for Vegetation that Shades Water Bodies. Regional Water Board. 	<ul style="list-style-type: none"> The Regional Water Board encourages parties responsible for vegetation that provides shade to a water body in the Scott River watershed to preserve and restore such vegetation. This may include planting riparian trees, minimizing the removal of vegetation that provides shade to a water body, and minimizing activities that might suppress the growth of new or existing vegetation (e.g., allowing cattle to eat and trample riparian vegetation). The Regional Water Board shall develop and take appropriate permitting and enforcement actions to address the human-caused removal and suppression of vegetation that provides shade to a water body in the Scott River watershed. The Regional Water Board's Executive Officer shall report to the Regional Water Board on the status of the preparation and development of appropriate permitting and enforcement actions by [insert date that is to be determined]. 	<ul style="list-style-type: none"> The Regional Water Board shall develop and take appropriate permitting and enforcement actions to address the human-caused removal and suppression of vegetation Scott River watershed riparian zones to maintain shade, microclimate and large wood recruitment. <i>As general guidance, with some exceptions, removal of riparian vegetation is prohibited.</i> The Regional Water Board's Executive Officer shall report to the Regional Water Board on the status of the preparation and development of appropriate permitting and enforcement actions by [insert date that is to be determined]. <i>The Regional Water Board encourages the restoration of upland and valley floor riparian zones necessary to reduce sediment and temperature pollution.</i> <i>The Regional Water Board specifically recommends the re-establishment of cottonwood gallery forest in valley floor riparian zones to provide better shade, channel definition, habitat complexity, and functions such as trapping sediment from flood waters and protecting valuable agricultural land.</i> <i>The Regional Water Board recommends the use of conservation easements in riparian zones on agricultural land to allow riparian recovery while maintaining viability of the local agricultural economy.</i> <i>The Regional Water Board recommends long term goals of rearrangement of rip rap in reaches of the Scott River where the channel is simplified and constricted with a secondary objective of providing the river with access to its flood plain to assist in replenishing groundwater.</i> <i>The Regional Water Board will act to reduce ground water pumping and depletion where it is found to be limiting recruitment and survival of riparian trees.</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Temperature & Vegetation	<ul style="list-style-type: none"> Parties Responsible for Vegetation that Shades Water Bodies. Regional Water Board. 		<p>Continued from previous page.</p> <ul style="list-style-type: none"> <i>The Regional Water Board shall address the removal and suppression of vegetation that provides shade to a water body through the up-coming Stream and Wetland Protection Policy. The Policy will be a comprehensive, region-wide riparian policy that will address the importance of shade on instream water temperatures and will potentially propose riparian set-backs and buffer widths. The Policy will likely propose new rules and regulations, and will therefore take the form of an amendment to the Basin Plan. Regional Water Board staff are currently scheduled to develop this Policy by 2007, with funding available through a grant from the U.S. EPA.</i>
Water Use	<ul style="list-style-type: none"> Water Users. County of Siskiyou (County). Quartz Valley Indian Reservation Stakeholders. Regional Water Board. 	<ul style="list-style-type: none"> The Regional Water Board encourages water users to develop and implement water conservation practices. The Regional Water Board requests the County, in cooperation with other appropriate stakeholders, to study the connection between groundwater and surface water, the impacts of groundwater use on surface flow and beneficial uses, and the impacts of groundwater levels on the health of riparian vegetation in the Scott River watershed. The study should: (1) consider groundwater located both within and outside of the interconnected groundwater area delineated in the Scott River Adjudication,** (2) the amount of water transpired by trees and other vegetation, and (3), if deleterious impacts to beneficial uses are found, identify potential solutions including mitigation measures and changes to management plans. Should the County determine that it and its stakeholders are able to commit to conducting the above study, the County, in cooperation with other stakeholders, shall develop a study plan by [insert date that is 1 year from the date of U.S. EPA approval]. The study plan shall include: (1) goals and 	<ul style="list-style-type: none"> <i>The Regional Water Board shall take action to secure necessary instream flows to protect water quality where water diversion is the clear cause of impairment, such as where cold water tributaries are dewatered.</i> <i>The Regional Water Board shall require water users to develop and implement water conservation plans and practices over a ten year time frame, where action is needed to restore surface flows and water quality.</i> The Regional Water Board requests that the Department of Water Resources, in cooperation with the Quartz Valley Indian Reservation and appropriate stakeholders, study the connection between groundwater and surface water, the impacts of groundwater use on surface flow and beneficial uses, and the impacts of groundwater levels on the health of riparian vegetation in the Scott River watershed. The study should: (1) consider groundwater located both within and outside of the interconnected groundwater area delineated in the Scott River Adjudication,** (2) the amount of water transpired by trees and other vegetation, and (3), if deleterious impacts to beneficial uses are found, identify potential solutions including mitigation measures and changes to

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
		objectives; (2) data collection methods; (3) general locations of data collection sites; (4) data analysis methods; (5) quality control and quality assurance protocols; (6) responsible parties; (7) timelines and due dates for data collection, data analysis, and reporting; (8) financial resources to be used; and (9) provisions for adaptive change to the study plan and to the study based on additional study data and results, as they are available.	management plans. • Should the DWR determine that it and its stakeholders are able to commit to conducting the above study, the DWR, in cooperation with <i>the Quartz Valley Indian Reservation and</i> other stakeholders, shall develop a study plan by [insert date that is 1 year from the date of U.S. EPA approval]. The study plan shall include: (1) goals and objectives; (2) data collection methods; (3) general locations of data collection sites; (4) data analysis methods; (5) quality control and quality assurance protocols; (6) responsible parties; (7) timelines and due dates for data collection, data analysis, and reporting; (8) financial resources to be used; and (9) provisions for adaptive change to the study plan and to the study based on additional study data and results, as they are available.
Water Use	<ul style="list-style-type: none"> • Water Users. • County of Siskiyou (County). • <i>Quartz Valley Indian Reservation</i> • Stakeholders. • Regional Water Board. 		<ul style="list-style-type: none"> • <i>The Regional Water Board requests that the State Water Board and its Division of Water Rights take the findings of the above groundwater study into consideration and act accordingly to protect and restore the instream beneficial uses of the Scott River and its tributaries, with particular focus on those beneficial uses associated with the cold water fishery.</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Flood Control & Bank Stabilization	<ul style="list-style-type: none"> Parties Responsible for Flood Control Structures or Dredge, Fill, and/or Bank Stabilization Activities. Regional Water Board. 	<ul style="list-style-type: none"> The Regional Water Board encourages parties responsible for levees and other flood control structures to plant and restore stream banks on and around existing flood control structures. The Regional Water Board shall rely on existing authorities and regulatory tools, such as the 401 Water Quality Certification program, to ensure that flood control and bank stabilization activities in the Scott River watershed are conducted in a manner that minimizes the removal or suppression of vegetation that provides shade to a water body and minimizes changes in channel morphology that could increase water temperatures. 	<ul style="list-style-type: none"> The Regional Water Board encourages parties responsible for levees and other flood control structures to plant and restore stream banks on and around existing flood control structures. The Regional Water Board shall rely on existing authorities and regulatory tools, such as the 401 Water Quality Certification program, to ensure that flood control and bank stabilization activities in the Scott River watershed are conducted in a manner that minimizes the removal or suppression of vegetation that provides shade to a water body and minimizes changes in channel morphology that could increase water temperatures. As general guidance: <ul style="list-style-type: none"> All bank stabilization projects conducted in the Scott River watershed will require a 401 permit. All bank stabilization projects conducted in the Scott River watershed shall incorporate riparian plantings, and rock-only bank stabilization projects will not be allowed. Exceptions may be granted, but only occasionally with strong justification. The Regional Water Board shall work with appropriate agencies and stakeholders to develop a protocol for what will occur after a large flood damages flood control structures and property. A goal of the plan will be to find cost-effective means to increase sinuosity of stream channels and re-establish the connection between streams and their floodplains. The Regional Water Board will encourage and support landowners who choose to seek conservation easements to cease or reduce agricultural activities in areas near stream channels to facilitate riparian restoration and reduce flooding of agricultural land.

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Timber Harvest	<ul style="list-style-type: none"> • Private & Public Parties Conducting Timber Harvest Activities. • Habitat Conservation Plan Holders. • Regional Water Board. 	<ul style="list-style-type: none"> • The Regional Water Board shall use appropriate permitting and enforcement tools to regulate discharges from timber harvest activities in the Scott River watershed, including, but not limited to, cooperation with, and participation in, the California Department of Forestry and Fire Protection's timber harvest project approval process. • The Regional Water Board shall use, where applicable, general or specific waste discharge requirements and waivers of waste discharge requirements to regulate timber harvest activities on private and public lands in the Scott River watershed. • Timber harvest activities on private lands in the Scott River watershed are not eligible for Categorical Waiver C included in the Categorical Waiver of Waste Discharge Requirements for Discharges Related to Timber Harvest Activities on Non-Federal Lands in the North Coast Region (Order No. R1-2004-0016, as it may be amended or updated for time to time) simply through the adoption of this TMDL Action Plan. However, timber harvest activities on private lands in the Scott River watershed may be eligible for Categorical Waivers A, B, D, E, and F, as appropriate. • Where a Habitat Conservation Plan (HCP) is developed, Regional Water Board staff shall work with the HCP holder to develop, for Board consideration, ownership-wide waste discharge requirements for activities covered by the HCP, with any additional restrictions necessary to protect water quality and beneficial uses. 	<p><i>Proposed actions appropriate with the following additions:</i></p> <ul style="list-style-type: none"> • <i>In considering WDRs, the Regional Water Board shall examine indices of cumulative effects risk (i.e. road densities, percent of watershed area harvested, and road stream crossing density) in watersheds with proposed timber harvests and compare them to prudent risk levels recommended in regional scientific literature.</i> • <i>The Regional Water Board recognizes that water quality and aquatic habitats in some tributaries may be in such a degraded state that significant watershed rest (time period with limited harvesting) and erosion control efforts (such as road upgrading and decommissioning) must occur before additional large-scale commercial harvest is allowed. In general, wet-weather hauling will not be permissible.</i> • <i>The Regional Water Board staff will consider the following through waste discharge authority as part of timber harvest review: limiting riparian harvests to allow large wood recruitment for coho and maintaining near stream microclimate; reducing activities on unstable lands, reducing road densities, near stream roads and crossings; and returning forest conditions in the rain-on-snow zone to levels that reduce the risk of increased peak discharge.</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
U.S. Forest Service & U.S. Bureau of Land Management	<ul style="list-style-type: none"> • U.S. Forest Service (USFS). • U.S. Bureau of Land Management (BLM). • Regional Water Board 	<p>• The Regional Water Board and federal land management agencies, including the USFS and the BLM, shall work together to draft and finalize a Memorandum of Understanding (MOU) that shall address sediment waste discharges, elevated water temperatures, and grazing activities within the Scott River watershed. The MOU shall be drafted and ready for consideration by the appropriate decision-making body(ies) by [insert date that is 2 years from the date of U.S. EPA approval]. The MOU shall include the following contents:</p> <p>Contents Related to Sediment Waste Discharges:</p> <ol style="list-style-type: none"> 7. A date for the completion of an inventory of all sediment waste discharge sites and all roads on USFS/BLM land. 8. A date for the completion of a priority list. 9. A date for the completion of a schedule for the repair and control of sediment waste discharge sites. 10. A date for the completion of a document describing the sediment control practices to be implemented by the USFS/BLM to repair and control sediment waste discharge sites. 11. A description of sediment control practices, road maintenance practices, and other management measures to be implemented by the USFS/BLM to prevent future sediment waste discharges. 12. A monitoring plan to ensure that sediment control practices are implemented as proposed and are effective at controlling discharges of sediment waste. 13. A commitment by the USFS/BLM to complete the inventory, develop the priority list, develop and implement the schedule, develop and implement sediment control practices, implement the monitoring plan, and conduct adaptive management. <p>Contents Related to Elevated Water Temperatures:</p> <ol style="list-style-type: none"> 14. A commitment by the USFS/BLM to make permanent and implement the Riparian Reserve buffer width requirements. 15. A monitoring plan to ensure that the Riparian Reserve buffer widths are effective at reducing high water temperatures. 16. A commitment by the USFS/BLM to implement the Riparian Reserve monitoring plan and conduct adaptive management. 	<p>• <i>The Regional Water Board staff, through waste discharge authority in timber harvest review with the U.S. Forest Service, should consider a moratorium of any timber harvest in the Scott River basin that reduces canopy closure in the transient snow zone.</i></p> <p>• <i>The Regional Water Board shall require that the USFS provide a study demonstrating forest regrowth and return to stand conditions (multi-tiered canopy) that lessen the risk of un-naturally high peak flows to prevent frequent flood damage to stream channels in the Scott River watershed.</i></p> <p>• <i>The Regional Water Board staff shall consider withholding approval of timber harvests that substantially reduce the canopy in the lower Scott River watershed until the Redwood Sciences Laboratory study results on BMPs is released and it is demonstrated that USFS BMPs have protected water quality</i></p> <p>• <i>The Regional Water Board will work cooperatively with the Klamath National Forest to reduce road networks within the Scott River to the level that can be actively maintained.</i></p> <p>• <i>Roads decommissioned by the USFS to meet the above objective will have minimal erosion risk or maintenance requirements.</i></p> <p>• <i>Prioritization of road decommissioning shall follow a hierarchy that protects watersheds with coho salmon or that provide salmonid refugia first (i.e. Elder et al., 2002)</i></p>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
U.S. Forest Service & U.S. Bureau of Land Management	<ul style="list-style-type: none"> •U.S. Forest Service (USFS). •U.S. Bureau of Land Management (BLM). •Regional Water Board. 	<p>Continued from previous page.</p> <p>Contents Related to Grazing Activities:</p> <p>11. A date for the completion of a description of grazing management practices and riparian monitoring activities implemented in grazing allotments on USFS/BLM lands.</p> <p>12. A commitment by the USFS/BLM and the Regional Water Board to determine if existing grazing management practices and monitoring activities are adequate and effective at preventing, reducing, and controlling sediment waste discharges and elevated water temperatures.</p> <p>13. A commitment by the USFS/BLM to develop revised grazing management practices and monitoring activities, should existing measures be inadequate or ineffective, subject to the approval of the Regional Water Board's Executive Officer.</p> <p>14. A commitment by the USFS/BLM to implement adequate and effective grazing management practices and monitoring activities and to conduct adaptive management.</p>	

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Grazing	<ul style="list-style-type: none"> • Private Parties Conducting Grazing Activities. • Regional Water Board 	<ul style="list-style-type: none"> • The Regional Water Board encourages the parties responsible for grazing activities to take necessary actions to prevent, minimize, and control sediment waste discharges and elevated water temperatures. • The Regional Water Board's Executive Officer shall require parties responsible for grazing activities on private lands in the Scott River watershed to develop, submit, and implement a Grazing and Riparian Management Plan and a Monitoring Plan on an as-needed, site-specific basis. A Grazing and Riparian Management Plan shall describe, in detail, (1) sediment waste discharges and sources of elevated water temperatures caused by livestock grazing, (2) how and when such sources are to be controlled and monitored, and (3) management practices that will prevent and reduce future sources. By [insert date that is 2 years from the date of U.S. EPA approval], criteria shall be developed for determining when a Grazing and Riparian Management Plan shall be required, although nothing precludes the Executive Officer from requiring Grazing and Riparian Management Plans prior to this date. • Should human activities that will likely result in sediment waste discharges and/or elevated water temperatures be proposed or identified, through a Grazing and Riparian Management Plan or by other means, the responsible party(ies) shall be required to implement their Grazing and Riparian Management Plans and monitor through appropriate permitting or enforcement actions 	<i>Proposed actions appropriate</i>

Table 1. Proposed TMDL Implementation Actions and Recommended Alternative Actions

Topic	Responsible Parties	Action Proposed in Public Draft TMDL	Recommended Alternative Action
Siskiyou RCD & Scott River Watershed Council	<ul style="list-style-type: none"> • Siskiyou Resource Conservation District (SRCD). • Scott River Watershed Council (SRWC). • Regional Water Board. 	<ul style="list-style-type: none"> • The Regional Water Board and staff shall increase efforts to work cooperatively with the SRCD and SRWC to provide technical support and information to landowners and stakeholders in the Scott River watershed and to coordinate educational and outreach efforts. • The Regional Water Board shall encourage the SRWC to (1) implement the strategic actions specified in the Strategic Action Plan and (2) assist landowners in developing and implementing management practices that are adequate and effective at preventing, minimizing, and controlling sediment waste discharges and elevated water temperatures. 	<p><i>Proposed actions appropriate with the following addition:</i></p> <p><i>The Regional Water Board shall require that all water quality or trend monitoring studies conducted by the SRCD, SRWC or their consultants provide raw data, along with summary data and reports.</i></p>
Natural Resources Conservation Service	<ul style="list-style-type: none"> • Natural Resources Conservation Service (NRCS). • Regional Water Board 	<ul style="list-style-type: none"> • The Regional Water Board shall increase efforts to work cooperatively with the NRCS to provide technical support and information to responsible parties and stakeholders in the Scott River watershed and to coordinate educational and outreach efforts. 	<p><i>Proposed actions appropriate with the following addition:</i></p> <p><i>• The Regional Water Board will engage NRCS staff in discussions regarding response to flood damage to agricultural land and appropriate reach agreement on a plan of action.</i></p>
CA Dept. of Fish and Game	<ul style="list-style-type: none"> • CA Depart. of Fish & Game (CDFG). • Regional Water Board 	<ul style="list-style-type: none"> • The Regional Water Board shall encourage the CDFG and aid, where appropriate, in the implementation of necessary tasks, actions, and recovery recommendations as specified in the Recovery Strategy for California Coho Salmon (CDFG 2004) in the Scott River watershed. 	<p><i>Proposed actions appropriate with the following addition:</i></p> <p><i>• The Regional Water Board staff will work cooperatively with CDFG regarding coordination on shared authority such as stream bank and bed alteration that may affect water quality.</i></p> <p><i>• CDFG will be encouraged to provide Scott River fish trend monitoring data to Regional Water Board staff and coordinate on sediment studies in the Scott River canyon related to fall chinook salmon spawning success.</i></p>

* Although the Regional Water Board prefers to pursue the implementation actions listed in Table 4, the Regional Water Board shall take appropriate permitting and/or enforcement actions should any of the implementation actions fail to be implemented by the responsible party or should the implementation actions prove to be inadequate.

** Superior Court of Siskiyou County. 1980. Scott River Adjudication: Decree No. 30662.

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Appendices

Appendix A: Groundwater levels in Scott Valley 1953-2004

These figures and text were extracted from:

Quartz Valley Indian Community. 2005. Comments on Hypothesis Testing for Approach to Groundwater Studies, by Scott River Watershed Council – Water Committee. Quartz Valley Indian Community, Fort Jones, CA.

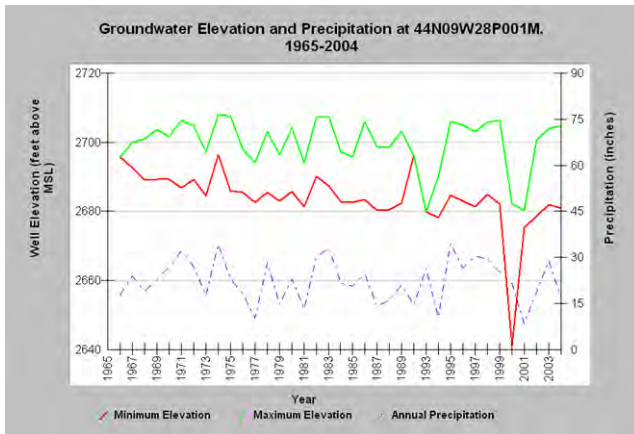
To obtain copies of the data on which these charts and maps are based, please contact Rebekah Sluss (EPA Director at QVIC) at rebekahqvir@yahoo.com or 530-468-5907.

Preliminary charting of annual minimum/maximum levels in California Department of Water Resources monitoring wells in the Scott Valley suggests that annual maximum levels have remained relatively constant over time (fluctuating with precipitation), but that annual minimum levels have declined since 1965 (though they fluctuate with precipitation). See maps and charts below for details.

[Cautionary note: when constructing charts, all measurements were used (data points were not excluded based on QAQC information)].

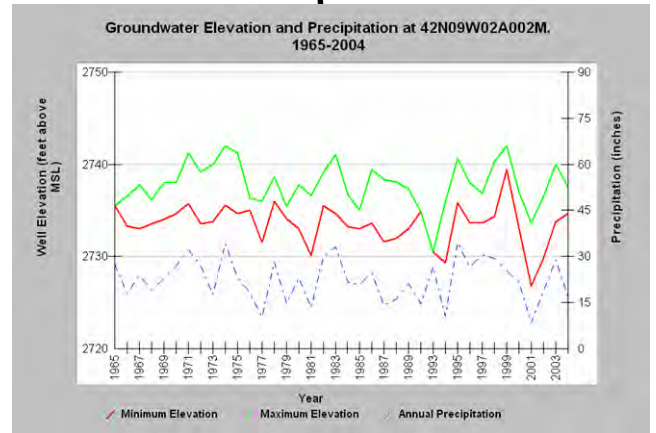
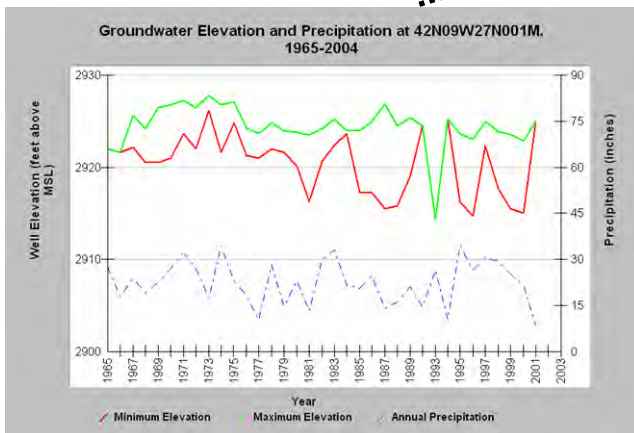
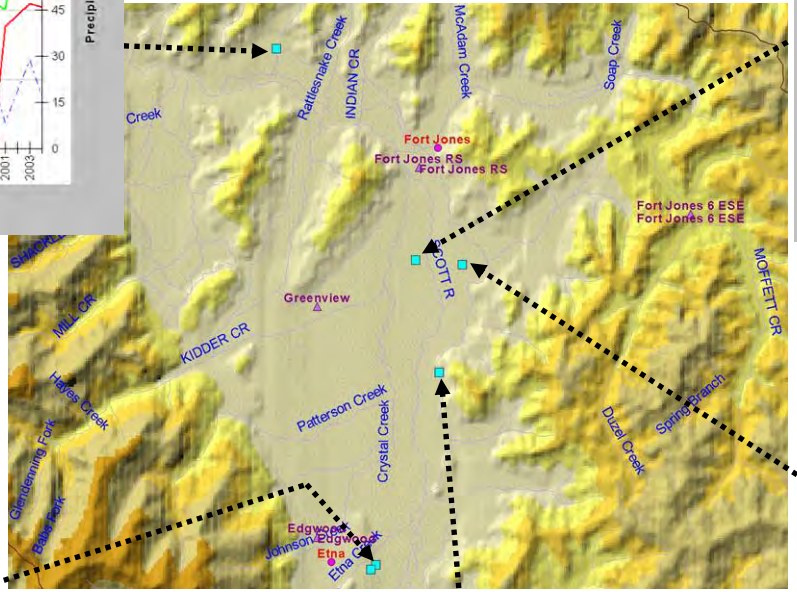
Each chart displays annual minimum and maximum groundwater levels at a California Department of Water Resources monitoring well. Also displayed on each chart is annual precipitation at Fort Jones (rain gage F20 3182 00). Groundwater elevations were typically measured once or twice per year, but have been measured more often in recent years.

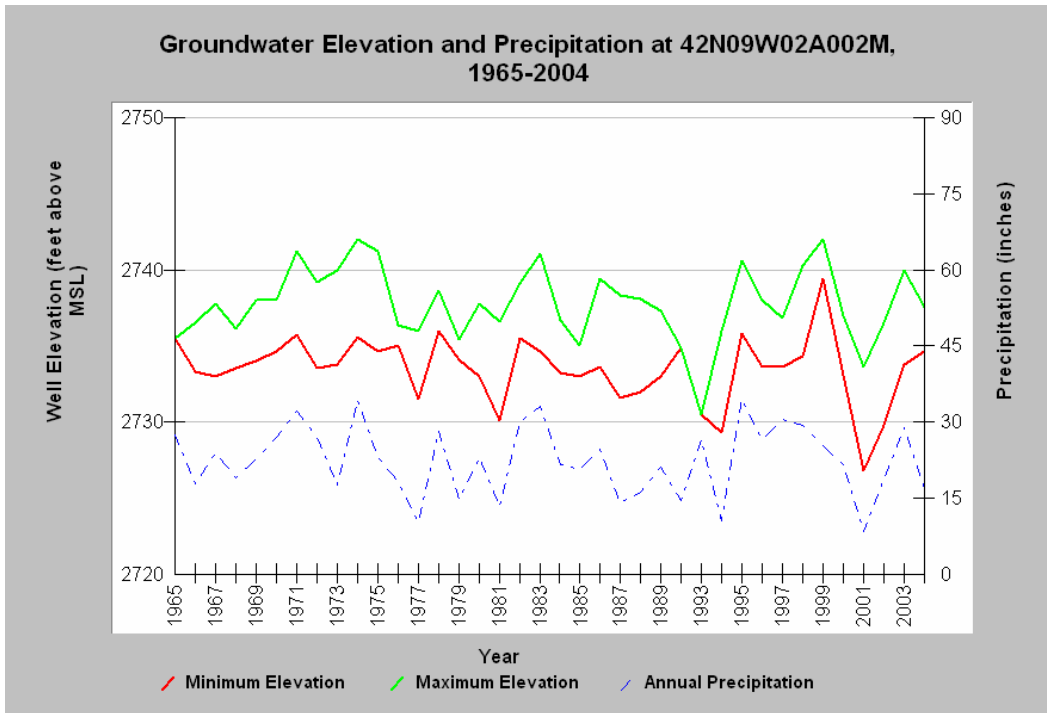
Scott Valley Groundwater Levels 1953-2004



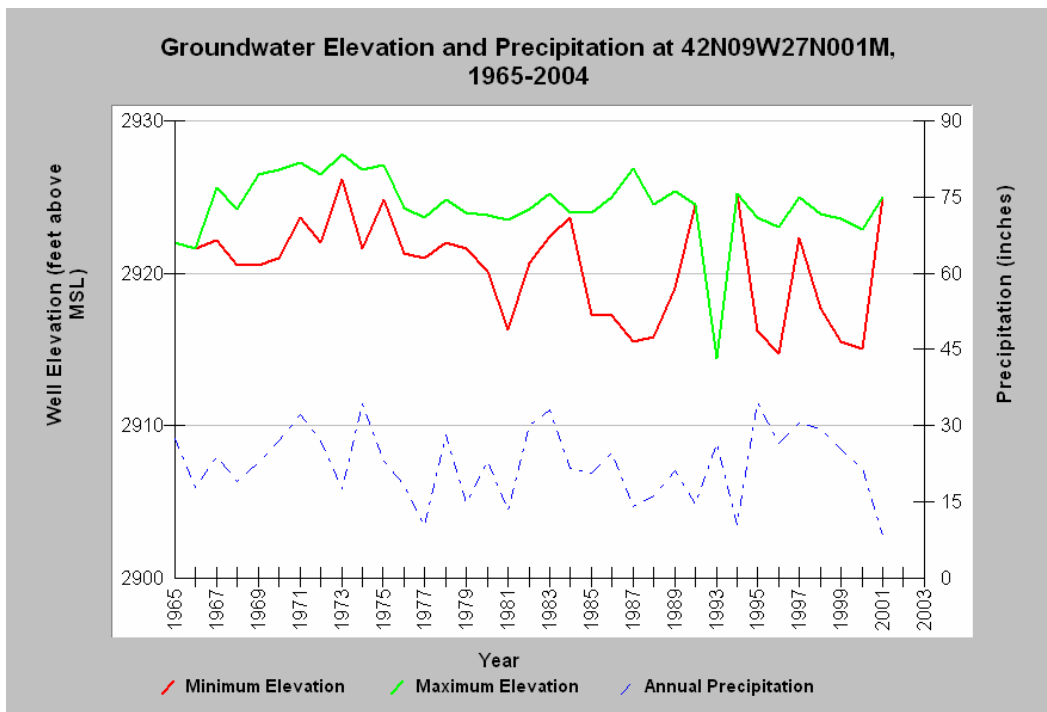
Groundwater data are from California
Department of Water Resources
Water Data Library -
<http://well.water.ca.gov/>

Precipitation data are from Fort Jones rain
gage (F20 3182 00)
California Data Exchange Center -
<http://cdec.water.ca.gov>



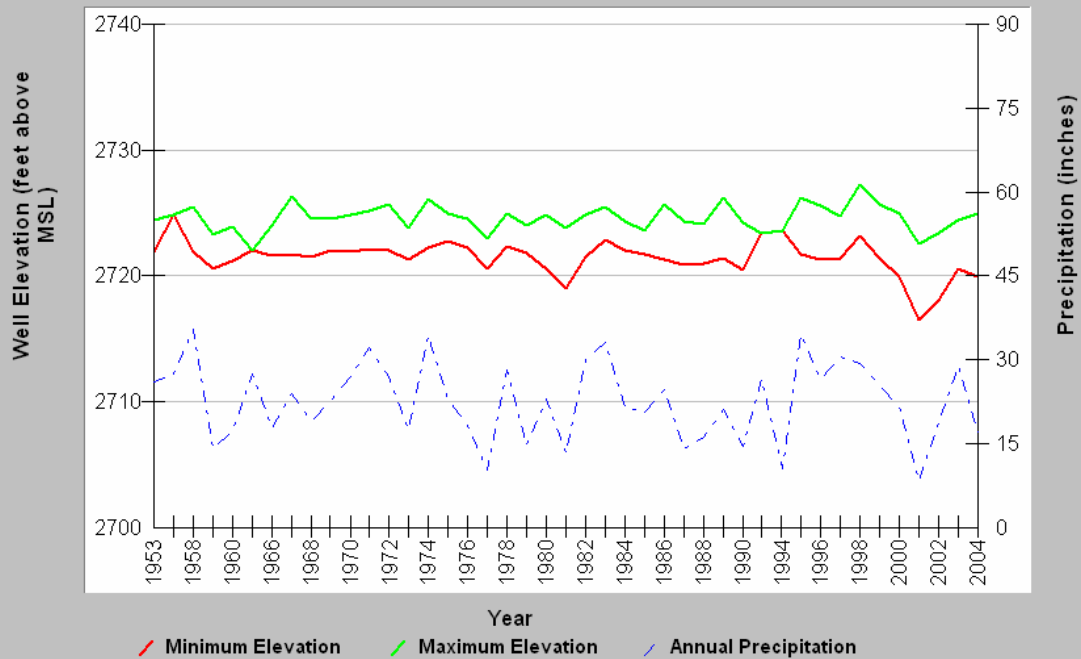


California Department of Water Resources well 42N09W02A002M, approximately 8 kilometers northwest of Fort Jones, for the years 1965-2004.



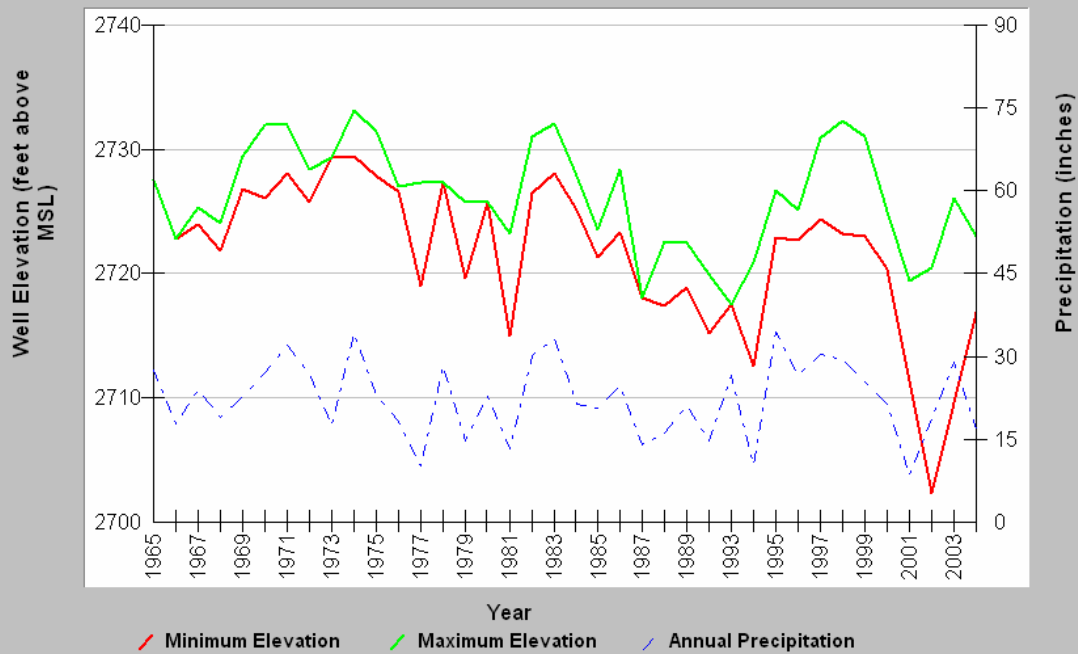
California Department of Water Resources well 42N09W27N001M, approximately 8 kilometers east of Etna, for the years 1994-2004.

**Groundwater Elevation and Precipitation at 43N09W23F001M,
1953-2004**

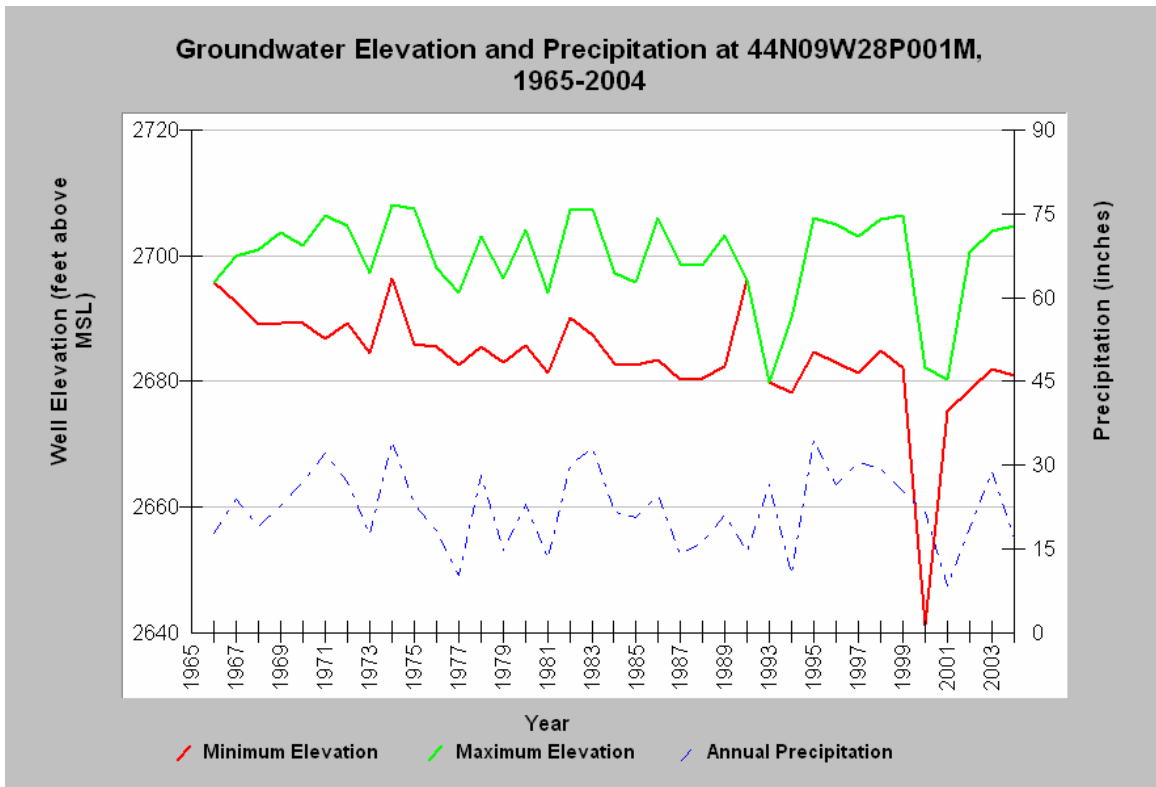


California Department of Water Resources well 43N09W23F001M, approximately 5 kilometers south-southwest of Fort Jones, for the years 1953-2004.

**Groundwater Elevation and Precipitation at 43N09W24F001M,
1965-2004**



California Department of Water Resources well 43N09W24F001M, approximately 5 kilometers south-southeast of Fort Jones, for the years 1965-2004.



California Department of Water Resources well 44N09W28P001M, approximately 8 kilometers northwest of Fort Jones, for the years 1965-2004.



YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548

December 19, 2006

Bob Williams
Staff Environmental Scientists
Conservation Planning
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

Re. Scoping comments for the California Department of Fish and Game (CDFG) Draft Environmental Report for the proposed Shasta and Scott River Watershed-Wide Permitting Program

Dear Mr. Williams:

This letter contains the technical comments of the Yurok Tribal Fisheries Program regarding the watershed-wide permitting programs for both the Scott and Shasta Rivers. I would like to thank you for the opportunity to submit these comments beyond the original due date. Our staff has been stretched thin during recent months dealing with a multitude of ongoing important issues related to the health of the Yurok Tribe's fisheries resource.

The Yurok reservation is located along the lower 44 miles of the Klamath River. The fisheries resource of the Klamath Basin is integral to the Yurok way of live; for subsistence, ceremonial, and commercial purposes. The Yurok Tribe is the largest harvester of Klamath Basin fish populations, dependent upon all fish stocks that migrate through the reservation, including coho salmon and other species that are destined for the Scott and Shasta Rivers. These scoping comments are intended to assist the State with development of the watershed-wide permitting programs in a manner that fully protects, conserves and restores fish populations of the Scott and Shasta Rivers; basins that have the potential to once again be primary producers of fish for the sustenance of Yurok People.

It should be noted that it is a challenge to draft meaningful scoping comments regarding a DEIR that will cover an Incidental Take Permit (ITP) and Master Streambed Alteration Agreement (MSAA) when neither of these documents are yet available for review. We look forward to consulting with CDFG regarding these documents when they become available for our review. The comments listed below are in regard to the *Environmental*

Checklist/Initial Study that has been distributed for both the Scott and Shasta Rivers permitting programs.

Scope of Analysis

From the Environmental Checklist/ Initial Study it appears that the ITP is intended to apply to all agricultural activities undertaken by those who sign up and not just stream diversions and restoration projects. If this is the case the EIR must analyze and consider the entire scope of the agricultural activities to be covered, including the cumulative impact of all agricultural activities in each sub-basin currently occurring as well as anticipated activities. The full range of agricultural activities and impacts includes but is not limited to groundwater pumping, length of irrigation season, cropping patterns and systems, grazing systems, summer pasturage and stocking per acre, nutrient production and cycling, nutrient export/delivery to streams. If the word agricultural is defined to include silvicultural activities, then that needs to be clearly stated. If, as appears from the initial study, the analysis only addresses stream diversion and restoration activities, then the ITP must be similarly limited in scope and should not be applied to entire agricultural operations.

Baseline

A primary concern we have with the DEIR is that the baseline being proposed is narrowly defined as existing conditions at the time the ITP application was submitted (spring of 2005); the conditions that led to the listing of coho salmon under the California Endangered Species Act (CESA). This baseline fails to consider the past activities that have led to the degradation of coho habitat, such as the construction of Dwinell Dam in the Shasta River, the over-diversion of stream flow in both basins, the over-pumping of ground water that is hydrologically connected to surface flow, and stream channelization that has occurred to protect farm land. Per the requirements of CEQA, we request that the DEIR conduct a cumulative environmental impacts analysis, and that an assessment be made regarding the impacts to coho salmon from ongoing land and water management activities of these basins.

The environmental baseline for in-stream flows for fish should be the flows ordered in the adjudication at the gauging station. It is assumed that these flows were based on CDFG and USFS input. In fact, additional flows were requested but not granted in the adjudication.

Instream Flow

We are fully supportive of activities that will improve flows in the Scott and Shasta Rivers, as low flow is a primary factor limiting fish production from these basins. However, the success of actions intended to increase instream flow is dependent upon several factors; the “devils in the details” so to speak. Therefore, we recommend that the following assessments be conducted while developing the DEIR.

- Given that the Scott and Shasta Rivers are over-allocated, there should be an assessment of the ability to address increase of flow in an over-allocated system. For example, if California Water Code 1707 or some other mechanism is used to dedicate water rights for instream purposes, what is the likelihood that this water

will actually be used for these purposes over the long-term, rather than simply used by another diverter downstream? This analysis should include an assessment of likelihood that legal and/or illegal diversions will divert or pump out of the river the water dedicated for instream purposes.

- An assessment is also needed regarding the likelihood that the abandonment of surface water diversions will not be simply converted to groundwater pumping; pumping of groundwater that is hydrologically connected to surface water. This is especially important given that groundwater pumping is not proposed to be covered under the ITP. The NCWQCB has determined in the case of the Scott that the extent of connection between ground and surface water is not accurately known. Therefore, the extent of impact of conversion from surface to groundwater irrigation is also unknown. In this circumstance, the precautionary principle suggests that the USGS and DWR finding that surface and groundwater are “broadly interconnected” should be the basis of analysis.
- A process needs to be identified that will determine measurable benefits to stream flow above the current base-line. The CEQA process should be used to assess various alternatives for evaluating stream flow benefits from various activities. This analysis should include assessment of increases in cold water flows.
- If piping of irrigation ditches is to be used as a water conservation measure, then an assessment should be conducted regarding the “net” water right vs. the “point of diversion” water right, and the resultant benefit to streamflow from the piping. There should be an assessment to determine whether piping of water in some locations may actually result in less stream flow, because of increased “net” diversion and a decrease of water leaking from ditches and returning to the stream.
- If ground water pumping is exchanged for surface water diversions, what effect will this have on the duration of the irrigation season? Could the irrigation season be extended, thereby delaying the time the stream would be re-watered in the fall? How will this be assessed prior to implementation? Since groundwater is not regulated, how will someone be prevented from pumping more or longer?
- A hydrologic assessment should be conducted regarding the relationship between ground water pumping and surface flows. All groundwater pumping measures should be guided by the results of such an assessment.
- Diversion ditches can be high maintenance, to the point that they are occasionally abandoned. Abandonment can be caused by stream channel migration or simply result from an extended period of poor maintenance. It is natural for diversion ditches to occasionally be abandoned, which is envisioned in state water law; water rights are not forever, but only for as long as they can be used. An assessment should be made in the CEQA process to determine whether piping of some ditches may affect the abandonment of ditches, thereby resulting in long-term increased water diversions. Will there be a process implemented to prevent this from occurring?
- Determinations regarding the appropriate time of year for a stream to lose connectivity should be based upon sound biology and hydrology. An assessment should be made to assess the scientific basis of any such determinations. Where

available, historical information concerning when certain streams naturally dewatered should be used and cited.

- An assessment needs to be conducted regarding whether the ITP will address non-adjudicated water rights, such as riparian and appropriative water rights.

Specificity of Language

An assessment should be conducted of the ITP and MSAA regarding the specificity of language included in the permits. For example, if there is language in regard to the dedication of water to instream flow, such language should be stated as “no less than” rather than “up to” (Scott River Initial Study, section 8.4.1 Flow Enhancement Mitigation 3).

Instream Structures

The CEQP process should include an assessment regarding the extent that instream structures and large-scale rip rap will be covered by the ITP. Will activities be distinguished regarding habitat restoration vs. protection of fields?

Prioritization of Streams for Restoration

The CEQA process should include an analysis of how streams or stream segments will be prioritized for restoration efforts. How will essential life stages be considered spatially and temporally in such a prioritization process?

Installation of Fencing and Riparian Restoration and Revegetation

If riparian planting or fencing are implemented as avoidance, minimization, or mitigation measures, the CEQA process should conduct an analysis regarding the width and resultant effectiveness of the areas to be planted or fenced. This analysis should identify the most important metric for assessing success. For example the length of stream to be restored should be given priority over the acres of trees planted and/or fenced? An analysis of effectiveness monitoring plans should also be conducted – for example, the metric for success should be based upon the densities of trees that survive, not simply the density of trees planted.

In-stream and riparian restoration projects should be required to be consistent with moving the stream toward “properly functioning condition” as defined on a site specific basis by DFG biologists.

Water Diversion Structures

If the ITP or MSAA are to cover activities such as ongoing maintenance of existing flashboard dams, gravel push-up dams and other temporary structures, the CEQA process should conduct an analysis regarding the relationship between these structures and Fish and Game Codes 5901 (states it is unlawful to not allow for fish passage) and 5937 (states that it is mandatory to allow enough water to remain in a stream to keep fish in good condition). The assessment should determine whether these structures would violate these codes. In cases where there is a violation, the environmental impacts should be assessed for providing remedies to the violation. Specifically, there should be an

analysis of the Dwinell dam and the benefits of providing fish passage to Coho as required by California law or the benefits to Coho from dam removal.

Stock Water Systems

The Initial Study for the Scott River states that an average of two alternative stock watering systems will be installed per year. The Shasta River Initial Study states that two alternative stock watering systems will be installed per year if this is determined to be beneficial for coho salmon. The CEQA process should conduct an analysis to assess this rate of implementation relative to the goal of providing adequate flow for coho salmon as soon as possible.

Compliance Monitoring

According to the Initial Study, the RCD's within each basin will be responsible for monitoring the sub-permittees' compliance with the terms and conditions of their sub-permits by instituting a comprehensive compliance monitoring program. The CEQA process should conduct a thorough assessment of the accountability of such a program. Will CDFG conduct audits to ensure that the compliance monitoring program is meeting its intended purpose?

Adaptive Management

We support the effectiveness monitoring results being used as the basis for an adaptive management type program, to refine future avoidance, minimization, and mitigation measures. The CEQA process should conduct an analysis of how such an adaptive management program will be implemented. How will such a Program be encouraged? What will be the structure of such a Program? Who will be participants in such a process? Will the Basin's Tribes be allowed participation in such a Program?

Access to Property

The Initial Study states the sub-permittees shall allow "non-enforcement CDFG representatives written consent to access the sub-permittee's property for the purpose of verifying compliance with, or the effectiveness of, required avoidance, minimization, and mitigation measures and/or for the purpose of fish population monitoring, provided CDFG notifies the sub-permittee at least 48 hours in advance." The CEQA process should assess the pros and cons from allowing such access to CDFG law-enforcement personnel as well, especially given their expertise in enforcing regulatory measure.

The CEQA process should also assess whether CDFG has the authority to cede a right to private landowners. There should be a thorough analysis of all non-waiver enforcement provisions including aerial surveillance and the lost environmental benefits of access and enforcement allowed before the waiver. Since the State Lands Commission and the Siskiyou County Council have declared that the Scott River is navigable, the CDFG may already have the right of access. This should be assessed in the EIR.

Water Master Reporting

The Initial Study states that DWR will report the results of water use information to CDFG on a monthly basis from April to November of each year. The CEQA process should assess how often DWR will be visiting each point of diversion to ensure compliance with the law, as well as assess whether the information DWR reports to CDFG be- available to the public?

Summary

In summary, many of the activities discussed in the Initial Studies have the potential to dramatically improve conditions in the Scott and Shasta Rivers for coho salmon as well as the overall aquatic health of these ecosystems. As mentioned earlier, the success of these activities is dependent upon the details associated with their implementation. Therefore, we request thorough analysis be conducted throughout the environmental review process to ensure that implementation is effective in achieving desired results. In the end, the effectiveness of these permitting Programs should be based on results, both in regard to specific projects as well as the overall Program resulting in increased populations of coho salmon. If you would like to discuss these comments, please don't hesitate to contact me at the address in the letterhead. We look forward to meeting with CDFG staff to discuss the ITP once it becomes available for our review.

Sincerely,

Dave Hillemeier
Yurok Fisheries Program Manager

NATIVE AMERICAN HERITAGE COMMISSION

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October 25, 2006

Mr. Bob Williams

California Department of Fish & Game
Region 1

601 Locust Street
Redding, CA 96001

Re: SCH# 2006102095: CEQA Notice of Preparation (NOP) of a draft Environmental Impact Report (DEIR) for Scott River Watershed-Wide (Including Tributaries) Permitting Program; Siskiyou County

Dear Mr. Williams:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

- ✓ Contact the appropriate California Historic Resources Information Center (CHRIS). The record search will determine:
 - If a part or the entire (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded in or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission (NAHC) for:
 - * A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.
 - Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact.
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
- ✓ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

NATIVE AMERICAN HERITAGE COMMISSION

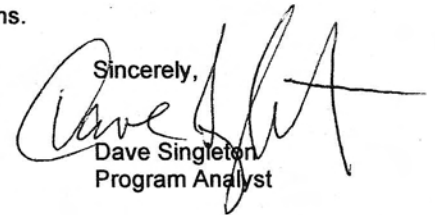
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- * CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.
- ✓ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.
- ✓ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,


Dave Singleton
Program Analyst

Cc: State Clearinghouse
Attachment: List of Native American Contacts

PS: Ron Lincoln is the new
chairperson of Quartz Valley.



COUNTY OF SISKIYOU

COUNTY ADMINISTRATIVE OFFICE

Barry Shioshita, County Administrator
P.O. Box 750 • 201 Fourth Street, Yreka, CA 96097
Phone: (530) 842-8005, Fax Number: (530) 842-8013
www.co.siskiyou.ca.us

November 20, 2006

Mr. Bob Williams
Staff Environmental Scientist
Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

RE: CEQA COMMENT ON THE SHASTA RIVER/SCOTT RIVER WATERSHED PROJECT
"INCIDENTAL TAKE PERMIT"

Dear Mr. Williams:

Siskiyou County has long taken a proactive approach to dealing with environmental issues that impact the constituency in our county, and as such, appreciates the opportunity to comment on this "groundbreaking approach to permitting" that can benefit public trust resources, landowners and water users in a synergistic way. This project is the result of the development of a Recovery Strategy for Coho Salmon and the Pilot Program on the Scott and Shasta River valleys for agricultural operations. We have the following comments:

1. It is critical that a very clear and complete description of the "programmatic" or "watershed-wide" nature of this CEQA process be included in the appropriate documents. The ESA Team stated in its workshop sessions that "types of measures" would be evaluated under CEQA, not specific measures or the specifics of measures. We think the manner and method of tiering this EIR to any needed EIRs for specific actions/projects that would be implemented as part of the avoidance, minimization, and mitigation measure process should be specifically stated, described, and analyzed. We feel that some type of Program EIR, Project EIR, Master EIR, or some other CEQA document may be necessary as a template for review and analysis of this "project." It is our understanding that one of the incentive benefits for prospective applicants is that the requirement for an individual CEQA review would be eliminated. Is there a possibility that a sub-permittee would have to do additional CEQA analysis and review under the program as currently outlined?

We understand that the State and Regional Water Boards may have a template for CEQA analysis and review on a state-wide and region-wide basis regarding waste discharge requirements. Communication with them may have benefits to this CEQA review.

The ESA Team also stated that it would be impossible to quantify the take or the benefits to fish from the measures in the permit. The potential success of this project hinges on the ability of people to actually see that the take of anadromous fish is avoided, minimized, or fully mitigated, and that the 1600 requirements will indeed protect the riverine environment. Therefore, it is critical to fully communicate a complete description of the permitting program and the "project" to be reviewed under CEQA.

2. There is a tremendous advantage for the Department of Fish and Game, public trust resources of the valleys, and the citizens/water users/farmers and ranchers to participate in a watershed-wide, streamlined permitting system. This proposed permitting program institutes actions where those actions are not just tied to an individual applicant's property (as under a standard individual permit), but are focused and prioritized in the watershed where the benefit to the public trust resources, sub-permittees, and permit holders alike is maximized. This unique program will allow prospective applicants an incentive as well as a choice to apply through the "Watershed-wide Permitting Program." This is another reason why it is important to clearly describe and distinguish the "program" from the "project". It is important that the larger benefit from a watershed-wide approach be communicated and analyzed in the CEQA process.


In order to realize these benefits, potential sub-permittees must see an advantage to working together for the benefit of other sub-permittees under the watershed-wide approach. Any financial burden in terms of potential costs and fees must be spread to all individuals participating considering the factors of equitability and proportionality. This burden needs to be less than the cost of applying for an individual permit. Under the watershed-wide approach, there must be equity and fairness across all resource users. The permit provisions and language must allow the RCDs, as permit holders, to implement the program in the best manner possible. Such permitting language should allow the RCDs the flexibility to organize and administer the permitting process in order to attract as many sub-permittees as possible. The RCDs must look at an appropriate fee structure, and may also need to specify measures that enable fair and equitable treatment, such as a mitigation banking program.

3. We suggest that this CEQA process prevent and clear up any existing confusion between the Recovery Strategy that is now being voluntarily implemented, and any stipulated permit measures that are currently designated as recovery tasks but which will become requirements under the Watershed-wide Permitting Program.

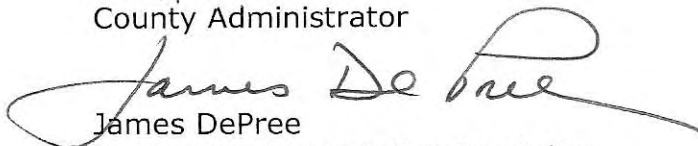
4. This permitting program must be economically sound. The opportunity to achieve strong resource management, a viable permitting program, and a user-friendly approach will pay dividends as open space in these river valleys continues to serve the needs of both citizens and public trust resources.
5. The manner and method that this project and program can interface with TMDL Action Plans and federal recovery plans should be discussed in the CEQA analysis. It makes sense that the two components, i.e., TMDL Action Plans and the federal recovery strategies should mesh, and this interactive approach will eliminate unnecessary and costly redundancy or conflict in achieving the objectives of both programs.
6. We encourage program paperwork simplification to the extent practical. Let's keep the process as simple as possible, and make it viable and attractive to potential applicants.
7. We encourage an evaluation of the use of hatcheries as replacement of habitat where that would be appropriate.

We think that the alternative of having permit applicants get an individual permit and be responsible for avoidance, minimization, and mitigation measures on that property is not as beneficial to resources and citizens as is the watershed-wide permitting approach currently being analyzed.

Sincerely,



Barry Shioshita
County Administrator



James DePree
Natural Resource Policy Specialist

Ad Hoc Committee

P.O. Box 484
Occidental, CA 95465
707 874-3855

Bob Williams
Department of Fish and Game
601 Locust Street
Redding, CA 96001

1 of 2

12/6/06

re: NOP DEIR Scott and Shasta River Watershed ITP and Master Streambed Alteration...

Dear Mr. Williams,

1. This ITP and "Master" streambed alteration agreement and its associated proposed Draft EIR are absolutely inappropriate and to the best of my knowledge and belief *illegal* -- a violation of CEQA and perhaps other California Codes. A "Master" agreement is outrageously wrong for the Scott and Shasta, especially considering the ongoing degradation of the Klamath watershed and the fact that the degradation is being used to justify the destruction of the commercial salmon fishing industry! We need analysis of *specific* projects and *specific* impacts, not a *generalized analysis* of activities in *general*.

The Klamath watershed is "degraded" (EPA assessment over 10 years ago). The Shasta has temperatures so high they are *lethal* for salmon. A once highly abundant resource has been reduced to threatened or nearly extinct, due to water diversions. The commercial salmon industry, along with the watershed, reduced to but a fraction of its former productivity and the the Siskiyou Resource Conservation District would consider a so-called "Master" streambed alteration agreement that would allow individual property owners and the RCD to *avoid* a specific analysis of proposed "bulldozing", "additional diversions", "cattle crossings", "flashboard dams", "gravel push-up dams", "pumps", "excavations" without requiring a *specific* EIR on each and every such potentially disastrous project proposal!??

Such a proposition in the context of the collapse of the commercial salmon industry, *due to degradation of the Klamath*, is appalling. We don't need any additional siltation downstream from any projects -- even those *purporting* to be in the best interest of the coho. The best approach to saving coho and chinook and increasing their abundance, is to get the heavy equipment out of the streams, and *reduce*, not add to the already existing water diversions.

2. Since the MSAA and ITP are still in *draft form*, it is premature to attempt an environmental assessment of them! It is impossible to assess the adequacy of the "checklist" absent the Final MSAA and ITP. Do we evaluate generalities now, only to see the "Draft" changed later?

3. What about *cumulative* impacts? *How many* new diversions, push-up dams, bulldozers, cattle-crossings, etc, would the Master Plan allow? How could an EIR assess cumulative impacts without knowing the sum total of projects and where exactly they are proposed to be located?

2 of 2

4. It might sound positive, on its face, to plant shade plants along the banks, but often the road to disaster is paved with good intentions. We cannot just assume that the best judgment and best risk-benefit assessment will prevail in any given case. Willows have been planted where they do not grow, and bank stabilization projects have caused bank failures. We need to be analyzing and commenting on specific projects as they are proposed, not "agreement" generalities.

5. We believe that the "future studies" in the ITP and MSAA for both Shasta and Scott Rivers are in violation of CEQA per *Sundstrom v Mendocino*. If you proceed with this environmental assessment, specific analysis of any project would happen *in the future, after* this generalized, non-specific, environmental review, *outside the scope of public disclosure* and comment, which we believe, is in violation of CEQA.

6. "Future studies" examples:

Page 12, Scott River Environmental checklist (equivalent examples are in the Shasta document):

"...each sub-permittee...*will* implement specified requirements in an effort to eliminate 100% of the fish barriers...." *Future specifications!* We cannot *assume* these "specified requirements" will be adequate just because they will be reviewed by CDFG. Specified requirements need to be prepared for the public and other agency review *during, not after*, the CEQA process!

"...each sub-permittee *will be* required to provide...fish passage...at each diversion.... Where such passage appears to be inadequate, the sub-permittee must submit plans to CDFG for review and approval." More *future* plans and *future* review. Plans must be part of, *not outside* the CEQA process. The *public* and other Agencies have an obligation to review those plans by law (CEQA).

"If engineered drawings are deemed necessary [by CDFG], they *will be* submitted for review and approval prior to implementing the project." More *future* plans and *future* review, *after* this CEQA process. Those specific plans need to be part of CEQA review.

7. In general, we believe that the MSAA and ITP for both Shasta and Scott Rivers are an attempt to remove specific instream projects from public scrutiny contrary to CEQA. This must not be allowed. We say scrap this project. It runs counter to all the positive efforts being made to restore our the watershed. If RCD and CDFG review was adequate to protect the Klamath watershed and its resources from degradation, the Klamath would not be degraded today! There is need for radical departure from past practices and a need for public and other agency ideas *per CEQA*.

Sincerely,



Ann Maurice



CALIFORNIA TROUT

November 20, 2006

Bob Williams
Staff Environmental Scientist
Conservation Planning
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

RE: Shasta and Scott River Watershed-Wide Permitting Program

Dear Mr. Williams,

California Trout appreciates the opportunity to comment on the California Department of Fish and Game's (CDFG) Shasta-Scott River Watershed-Wide Permitting Program (Program). We understand at this time we have the opportunity to comment on the scope and content of environmental information for the development of a Draft Environmental Impact Report (DEIR).

California Trout is a statewide conservation organization dedicated to protect and restore wild trout and steelhead waters throughout California. California Trout operates a field office in Mt. Shasta and has worked specifically in the Shasta River watershed since 2000. California Trout has served as a member of the statewide Coho Salmon Recovery Team and the Shasta-Scott Recovery Team (SSRT).

We are supportive of the Program to develop a watershed wide permitting process to implement coho salmon recovery tasks and facilitate compliance of agricultural activities and restoration projects with the California Endangered Species Act (CESA). However, for the program to succeed several fundamental issues must be addressed.

- The Program is intended to address Fish and Game Code Section 1602 but should not memorialize or provide any other explicit exemption for landowners to comply with the Fish and Game Code, including but not limited to Section 5937.
- California Trout recommends that these measures not be financed exclusively with public dollars. Diverse funding mechanisms for all

measures should be identified and include the contributions from applicants.

We are confident the above issues can be addressed and believe on the whole the implementation of the Program will facilitate implementation of Coho Recovery Strategy recommendations and improve habitat conditions for coho salmon in the Shasta and Scott Rivers. Below we provide our specific comments on the Initial Study by section and highlight issues in need of additional evaluation in preparing the Draft Environmental Impact Report (DEIR).

8.1 Project Overview

If DFG extends the Master Streambed Alteration Agreement (MSAA) an additional five years as proposed (pg. 2) there should be a public review process for the extension. The DEIR should evaluate the need for a public review process at the end of year five.

We look forward to reviewing and commenting on the specifics of the Incidental Take Permit (ITP) and the MSAA at the appropriate time. Our comments here are in the context of not reviewing the details of these plans because we understand they are still in draft form and not ready for public comment. We also understand these documents will be made available as part of the DEIR and we look forward to commenting then.

8.3 Environmental Baseline

CDFG defines environmental “baseline” conditions (pg. 6) as the date the application for an ITP is submitted. However, baseline conditions are what led to CESA and Federal ESA listings. The DEIR should evaluate the use of baseline conditions that provide a higher threshold than existing conditions.

8.4.1 Covered Activities

ITP and MSAA Covered Activity 1: Water Diversion Pursuant to a Legal Water Right.

All water rights should have mechanisms for verification as specified in the *Coho Recovery Strategy for Coho Salmon*, Table 10-1 recommendations WM-2a-d, pages 10.4 and 10.5. The DEIR should evaluate the potential impacts of the potential for legal water right diversion allocations to exceed available instream flows. The DEIR should identify and evaluate measures to protect coho salmon in these instances.

ITP and MSAA Covered Activity 2: Water Diversion Structures.

Covered Activities include flashboard dams, gravel push-up dams and other temporary structures. Gravel push-up dams “form a flow barrier that seasonally blocks the flow of the stream/river” (pg. 7). The DEIR should evaluate gravel push-up dams and their compliance with Fish and Game Code Sections 5901 and 5937.

8.4.2 Conditions of Approval

ITP General Condition C

This condition requires sub-permittees to provide “non-enforcement CDFG representatives written consent to access the sub-permittee’s property.....” (p. 11). California Trout requests that all CDFG employees be allowed access to sub-permittees property subject to the written consent and prior notice stipulations. Specifically denying access to CDFG enforcement representatives unnecessarily garners mistrust. Additionally the DEIR should evaluate the need for landowner access agreements for CDFG to inventory and assess fishery populations and habitat conditions in all areas covered by Program.

ITP General Condition D

This condition identifies sub-permittees as being responsible for any costs to implement any avoidance or minimization measures and that that the SVRCD is responsible for costs to implement any mitigation and monitoring measures. CalTrout agrees with this condition and we would also like to highlight the issue of funding these measures. CalTrout recommends that these measures not be financed exclusively with public dollars. Diverse funding mechanisms for all measures should be identified and include the contributions from applicants.

ITP General Condition F

The DEIR should explain and evaluate Condition F (pg. 11) regarding a \$100,000 letter of credit for CDFG to draw against if the RCD or sub-permittee fails to comply with measures they are responsible for.

ITP Additional Avoidance and Minimization Obligation C: Fish Passage Improvements

This condition requires that “the SVRCD and each sub-permittee with fish passages issues will implement specific requirements in an effort to eliminate 100% of the fish barriers on a scheduled basis over the term of the ITP” (Initial Study, Page 12). CalTrout supports this measure. However, we note the contradiction of this measure when compared to *ITP Additional Avoidance and Minimization Obligation I: Dwinnell Dam and the Montague Water Conservation District (MWCD)*. In regards to fish passage Obligation I requires the MWCD to shall develop a feasibility study to “investigate the possibility of providing fish passage at Dwinnell Dam” (Initial Study, Page 14, emphasis added). In the development of a Draft EIR this contradiction should be resolved by clearly identifying and evaluating potential measures to provide fish passage around Dwinnell Dam.

Flow Enhancement Mitigation 2: Improve Baseline Instream Flows Via Water Efficiency Improvements.

This mitigation measure states that “generally” a water transfer will utilize Water Code Section 1707 (p. 14). California Trout believes all transfers should be done under 1707 and request that the DEIR evaluate this water transfer issue.

Flow Enhancement Mitigation 3: Develop and Implement a Contingency Plan for Dry and Critically-Dry Water Years.

Flow Enhancement mitigation 3 (pg. 15) includes pumping groundwater to meet surface flow requirements during Dry and Critically-Dry Water Years. The DEIR should evaluate the potential impacts of pumping groundwater during dry years. Groundwater pumping during dry years has the potential to exacerbate low flow conditions.

Flow Enhancement Mitigation 4: Install Alternative Stock Water Systems.

Flow Enhancement mitigation 4 (pg. 15) also relies on groundwater pumping. As for *Flow Enhancement Mitigation 3* the DEIR should evaluate the potential impacts of groundwater pumping during dry years for stock water purposes. Specifically, connectivity and water right issues should be addressed.

8.5.3 Monitoring and Adaptive Management Program Under the ITP

The DEIR should evaluate the efficacy of allowing the SVRCD to be responsible for monitoring sub-permittees' compliance with the terms. We see the rationale in this arrangement given the SVRCD may be best suited to implement a monitoring program but the DEIR should clearly evaluate the relationship between the SVRCD and the CDFG as the enforcement agency. Our primary concern is that because the SVRCD is an organization representing member landowners and in certain circumstances be reluctant to report violations to CDFG and in some cases this may happen unintentionally. We believe these concerns can be alleviated by a clear evaluation in the DEIR of the role of the SVRCD in compliance and evaluation of the role of CDFG.

California Trout believes one of the most important parts of the Program is effectiveness monitoring. We recommend that the DEIR evaluate an effectiveness monitoring plan. We suggest an evaluation of the Integrated Status and Effectiveness Monitoring Program (ISEMP) currently being implemented in the Columbia River Basin. The ISEMP has been created as a cost effective means of developing protocols and new technologies, novel indicators, sample designs, analytical tools, data management, communication tools and skills, and restoration experiments. The most important and relevant part of the ISEMP is the Intensively Monitored Watershed (IMW) program designed to determine the effectiveness of restoration actions through an experimental management framework. We believe this program could provide an excellent framework for evaluating the success of the Program and California Trout stands ready to assist CDFG, SVRCD and landowners in establishing this program. Further information on the ISEMP program can be found at <http://www.nwfsc.noaa.gov/isemp>.

Conclusion

California Trout appreciates the opportunity to comment. We are supportive of CDFG, SVRCD and landowners efforts to develop the Program and are confident that a comprehensive Draft Environmental Impact Report will adequately address and evaluate our concerns. Any questions about California Trout's comments can be addressed to

Curtis Knight in our Mt. Shasta Area Office at (530)926-3755 or by email at caknight@jps.net.

Sincerely,

Curtis Knight
Mt. Shasta Area Manager

The public is invited to provide comment or concerns related to the Shasta River Watershed Project.

Name: Regina Cuchizola - Klamath River Keeper

Comments may be submitted tonight or mailed to:

Address: PO Box 21

Mr. Bob Williams,
Staff Environmental Scientist

City, State, Zip: Orleans CA 95556

Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

Telephone: 530 627-3280

(530) 225-2365 (phone)

E-mail: klamath@seup.net

(530) 225-2381 (fax)

COMMENT: The Shasta + Scott Rivers have most of the water diverted and need additional flows. The job of the agencies is to protect the Coho not only to work with water users. Down river communities are effected by the Scott + Shasta.

Additional water needs to be cold. Parks Creek should go it the river and not into Lake Shastina. Water weirs should not be bulldozed or grazed + ground water needs to be included in the Scott. I will provide additional comments later. Please have a hearing for

down river communities. We need to try to hard to give input. ~~I will do~~
Thank you, Regina

Bob Williams
Staff Environmental Scientist
Department of Fish and Game-North Coast Region
601 Locus St.
Redding, CA 96001

RE: Scoping comments on the Scott River ITP/Watershed Wide Permitting Program

Thank you for the opportunity to comment on the Scott ITPs/Watershed wide permitting program. The following comments are from the Klamath Riverkeeper and the Klamath Siskiyou Wildlands Center.

Aspects of the ITP that we support

First let us say that we fully support all the restoration projects included in the project, such as cattle exclusion fencing, riparian restoration, and in stream structures for salmon, and believe that any possible take associated with these activities can be mitigated. We however do not support many of the other covered activities and are very disturbed that very little mitigation for these activities is presented, even though they are largely responsible for the decline of the salmon. It seems that avoidance and minimization is ignored all together.

Activities that may be beneficial in the long term, and those that will be harmful to fish until the end of the ITO and MSAA should be analyzed and permitted separately.

We do not however support the coupling of these beneficial activities with the non-beneficial covered activities such as, allowing stream crossings of cattle and vehicles in the river, allowing equipment in the creek to build push-up dams, grazing in waterways, and massive water diversions.

These are the activities that have cause the decline of the Coho Salmon and should be covered in a separate permit. Furthermore TIP's rely on the avoidance, minimization and mitigation of impacts, and although none of these are presented to the public, it seems that minimization and avoidance options are not going to be analyzed at all.

Many other activities that should be included in a watershed wide permit are not even mentioned in this document. Do these activities need a second permit, or it is the plan of the DFG to ignore the take of Coho from non-agriculture activities? These activities include road building and timber harvesting, public and private road work in creeks, permanent dams, sewage treatment plants, timber mills, flood control activities, ext.

The process thus far has been exclusively for select future permittees, and is a violation to CEQA, treaty rights, and violates the public trust

We believe the currently process is not transparent, is not scientifically motivated or supported, and the supporting information and information we are commenting on is being selectively distributed. Furthermore the Environmental Checklist, which is the only information provided to the non-agriculture community whom has not been allowed

to be involved with the process, has very little information pertaining to either the needs of salmon, or the opinions of scientist or any stakeholders beyond the farming community. Furthermore it ignored all available science, the Coho recovery strategy, all cumulative affects to Coho, and does not quality any of its suggested covered activities or Contingency Plans. These factors leave the public, and other stakeholders, with next to no information to form their opinions on and generates mistrust.

We are very concerned that the farmers in the valley, whom are partially responsible for the problem, are the only people whom have been considered thus far in the process due to the fact the local RCD's only include them. The fishermen, tribes, scientist and other stakeholders have not had the opportunity to ever review the plan, let alone help to format it. This is a clear violation of the CEQA process and is extremely counter to the goal of recovery. We feel the covered activities, with the exception of the restoration activities cannot be mitigated as is, and the local RCDs have stated that the ITP are responsible to the farmers first and the Salmon second. Furthermore these activities will run counter to the Scott and ScottTMDLs, the Clean Water Act, the California Endangered Species Act, the Endangered Species Act, CEQA, the Port Cologne Act, public trust responsibilities, and tribal trust responsibilities, along with other applicable laws. We suggest that the DEIR include options that will protect salmon, avoidance and minimization, separate out restoration activities from degradation activities, use sound science and the Coho Recovery Plan.

ITP's and MSAA are virtually identical, and do not take into account watershed specific needs and limiting factors.

We are also very concerned that, with the exception of discussion of three fish barriers (none of which is the Dwinnell Dam), in the mitigation section, these ITPs are identical.

While both of these watersheds have similar issues, they have very different base line conditions and hydrology, therefore these watersheds having identical paperwork and permits is inappropriate. ITPs should be watershed specific, should be supported by sound science, and should be enforceable. In the draft form, this is certainly not the case. Of course due to the fact that we can not review the actually ITP but only the environmental checklist, we are assuming that the Environmental Checklist reflects the mistakes of the actual draft permit that we are not allowed to review.

Things that are different with the Scott River then the Shasta

As stated before the Scott River is naturally a very different river then the Scott. Although you are calling current conditions the baseline, this is not the case and in fact these watersheds have very different natural conditions.

Effects of forest management and the Scott River tempiture listing not addressed

“Channel scour in other lower Scott River tributaries may have also contributed to temperature increases. Loss of cold water contributions from these lower tributaries may have profound impact on ecosystem function in the lower Scott River.”

The tributaries in the lower Scott, and some in the valley are the refugia that keeps Coho alive, however the watershed wide permit for the Scott does not mention this nor the impacts of sediment to these tributaries. The whole Scott River is listed for sediment and the lower Scott is mainly on highly erosive Decomposed Granite soils. It is heavily roaded by both the Klamath National Forest and private timber companies. If any forestry adds sediment to the Scott River they should have to get a take permit.

Furthermore the impacts of the covered activities to sediment need to have a hard look. Many of the detrimental covered activities, such as creating gravel dams with equipment, and allowing vehicles and cows in waterways have a great chance of increasing sediment in the Scott River greatly and can most likely not be mitigated. Furthermore these activities will violate the Basin Plan, the Scott TMDL, and Porter Cologne. We have data and photos that support both the covered activities and forestry impacts to sediment in the Scott River

That being said here are our comments on the Environmental Checklist, which is the only document that non-farmers currently have to review. We have very little faith in this process and are hoping the Fish and Game immediately change it to be more inclusive. We also suggest separating out the restoration activities from the degradation activities, and using the best available science in creating these permits. We also suggest the each sub-permittee within this process undergoes CEQA, as it is the law.

Forest Services water rights for salmon ignored

Within the Scott River watershed the US Forest Service has a water right that it holds for salmon protection near the mouth of the Scott River. This water right is regularly not fulfilled due to overuse and possibly ground water pumping by upstream agriculture users. It is apparent that water rights that are used for salmon are ignored, while water rights for upstream agriculture is not managed properly. Any watershed wide permitting process needs to deal with water management. The ITP must mitigate the loss of salmon due to lack of water and must finally regulate some instream flows. The ignore this issue will open the ITOP to possible litigation or lead to the opening of the Scott River adjudication.

Groundwater is a major issue in the Scott River

“ There appears to be a substantial increase in the number of days with extremely low flows (Figure A5-31). Moffett Creek lost perennial surface flow in the late 1950's as a result of ground water depletion (DWR, 1958). The drop in ground water has contributed to loss of riparian vegetation that in turn effects bank stability.”

The interconnectedness of the ground and surface water in the Scott River has been documented for many years and scientific studies have been done, and more are planned on this subject. However the proposal for when there is low flows to deplete ground water ignores this fact. Due to the great number of water diversions, and the continual ground water pumping in the Scott Valley, most of the Scott River tributaries are now

subsurface, and many of the ground water diversions are actually directly next to these subsurface waterways. To ignore the role of groundwater in the Scott Valley, and the scientific controversy that surrounds it, is a violation of many laws. Furthermore by suggesting mitigating a flow issues, by using a practice that is one on the reasons there are such serious flow issues in the watershed is a violation of CEQA and public trust responsibilities. Indeed the continual denial of the interconnected nature of the ground water to surface water relationship in the Scott may be a limiting factor for Coho in itself and may lead to localized extinction of the Coho from the Scott Valley.

Cumulative effects within the Scott River

The Cumulative effects of the proposed ITP does not take into consideration the great impacts to the Scott River from the Dwinnell dam and Lake Shastina impoundment. This impoundments takes cold spring feed waters and makes them warm and nutrient rich. It also impounds and adds to all upriver pollution. Furthermore several large pollution sources, such as the Weed Wastewater Treatment Plant and the Roseburg Mill enter Lake Shastina, which compounds these sources of water quality problems. Are all these sources going to be included in the ITP? Does the Dwinell Dam, which not only blocks the Coho's migration, but also leads to the very conditions that cause salmon mortality, deserve to be included in this permit? Will it have it's own permit? Has the effects of this impoundment coupled with the covered activities been assessed? Will timber and population related take, be permitted? Is non-agriculture land management going to be assessed? Will the ITP include that the Scott River TMDL says that at minimum 45cfs is needed to keep salmon alive in the Scott River? Will CFS continue to insist that Coho only need voluntary restoration and not flow, even though this attitude led to the listing and ignores all available science and the Coho Recovery Plan? How will the ITP incorporate the Action Plan for the Scott River TMDL? How about the upcoming Stream and Wetland Protection Policy?

Many other activities that have a high potential to take Coho Salmon within the Scott River watershed are not addressed in any manner. This not only makes the Watershed Wide permitting process incomplete, but it will have substantial cumulative effects. These activities include: water diversions, groundwater diversions, road building and timber activities in a sediment listed watershed, chemical use, and public lands grazing.

Cumulative effectives within the Klamath Watershed

How these ITP's will interact with ongoing state and federal actions on the Klamath River is not discussed in the Environmental Checklist. Some of these, such as the recently litigated Biological Opinion on the effects of the Klamath Project on Coho Salmon, are extremely important to the survival of the same Coho Salmon that utilize the Scott River.

Other actions that will have a cumulative impact on Coho Salmon that are occurring in the Klamath are, the FERC Klamath Dams EIS, recent changes to Klamath Fishing management by the Pacific Fisheries Management Council, the CIP being planned by the Bureau of Reclamation, CDF timber harvest plans, The Federal Endangered Species Act

Bi-ops and Take Permits in the Scott and Shasta, the Hardy Flow Study, Ongoing Forest Service and BLM Management, the Klamath River TMDL, the Stream and Wetland Protection Policy, the State Water Board triennial review, and the implementation of the Non-point permitting program of the State Water Boards. It is also possible that due to the lack of action for the Coho that soon many other Klamath fisheries will soon be on the Endangered Species List.

The Environmental checklist does not use any science nor admit to scientific controversy

A wealth of science and Scientific Reports on the Klamath Coho, and the Scott and Scott exist, including reports and Documents from the Department of Fish and Game. Yet not even you own documentation or suggestion are included in the Environmental Checklist. Are you planning to ignore your own science or to pretend there is not existing analysis on the Coho Salmon? The failure to use supporting science or mitigation measures that are supported by science is a major downfall of this project. Your own Recovery Plan states that voluntary restoration has not stopped the de-watering of the Scott Watershed and thus the downfall of the Coho Salmon.

Suggested actions for Scott River Coho taken from the Coho Recovery Strategy

The ITP needs to address flow and groundwater use (even though it appears this is a bigger issue in the Scott). The Scott River is practically de-watered every year, and has a spring and glacier feed characteristic that makes the Scott unique, and very important to the Klamath River and to Coho Salmon. Peer reviews science states that the current serious degradation of the Scott River is more responsible than any other factor than perhaps the dams on the Klamath, to the decline of the Coho in the Klamath. The interconnected nature of the decline of the Klamath Coho and the Scott Coho, and the cumulative effects to the Klamath Coho from the impacts to the Scott impoundments and diversions, and the Klamath dams are not explored, or even mentioned. We suggest these relationships are explored.

Furthermore the almost yearly take of salmon due to dewatering, the impacts on smolt-juvenile production from low water quality and quantity, along with the impacts to the Coho both locally and cumulatively from fish disease need to be explored.

The following suggested actions are taken directly from the Coho Recovery Strategy and only reflect a very little of the pages and pages of discussion on the need of Coho to have flows to survive.

Flow

While the Coho Recovery Strategy focuses heavily on recovery and protection activities on the Scott and Shasta, yet very few of these Recommendations or limiting factors are addressed or even mentioned in the ITP.

All the restoration activities in the world will not work without water. The Scott River and tributaries are de-watered much of the year and riparian buffers are not used for agriculture throughout the watershed. **The ITP as presented in the Environmental checklist will be in violation of its own purpose,** which includes the following:

“Eliminate unauthorized take of Coho salmon caused by water diversions in the Scott River watershed and minimize and fully mitigate take of Coho salmon incidental to legal water diversions, recovery activities, and other lawful activities.

The discussion of flows and water users not being properly regulated is dominant in the Coho Salmon Recovery Strategy under the Shasta and Scott Pilot Program section, along with all available science on the Coho within the Shasta and Scott Rivers. However flow needs and regulation is barely mentioned in the scoping document. While it is impossible to know what is in the draft ITP for the general public whom is deprived of actual documentation to use for commenting, the fact is that until flows are addressed the permitting of actions that take salmon are not properly mitigated. Some quotes that support this fact are following:

The following science quotes support this claim. The Draft EIR should include scientific quotes to support not adding flow or dealing with ground water if this is not going to be include in the draft EIR

“Water temperatures in the Scott River can be limiting for salmonids, particularly in dry years. Flow depletion tends to contribute to temperature problems. Comprehensive temperature monitoring on the Scott and its tributaries has provided a greater understanding of how varying water years can effect temperature.”

“However, the anadromous fish production of the Scott River continues to be impaired by high sediment levels and high water temperature, which is partially related to flow depletion. There are some signs of sediment abatement through cooperative efforts in the French Creek drainage. However, sediment yield from some lower Scott River tributaries increased as a result of the 1997 flood and many reaches of the East Fork Scott, Moffett Creek and Shackleford Creek also suffered flood damage.”

“Reaches in the lower Scott Valley at Highway 3 may go dry in drought years as well. During the sequence of drought years from 1987 to 1992, tributaries such as Kidder Creek were dry even during winter months. Shackleford Creek continues to dry up before joining the Scott during late summer annually as a result of irrigation diversions. Long-term trends show that periods of critically low flow have tended to increase since 1942, when flow records began to be monitored consistently on the Scott River. A comparison was made of the number of days the Scott River has dropped below 40 cubic feet per second using U.S. Geologic Survey flow data. There appears to be a substantial increase in the number of days with extremely low flows (Figure A5-31). Moffett Creek lost perennial surface flow in the late 1950's as a result of ground water depletion (DWR, 1958). The drop in ground water has contributed to loss of riparian vegetation that in turn effects bank stability.”

“Water temperatures in the Scott River can be limiting for salmonids, particularly in dry years. Flow depletion tends to contribute to temperature problems. Comprehensive temperature monitoring on the Scott and its tributaries has provided a greater understanding of how varying water years can effect temperature.”

“Low instream flows, especially in dry years, limit habitat for Coho and other salmonids. There are no comprehensive plans to deal with providing instream flows for Coho salmon.”

“In non-watermaster areas, diverters may not be diverting their correct allotment and there is no verification that diverters are correctly following their adjudicated right, if diverters are taking more than their right it may be impacting instream flows, Coho salmon habitat and water-right holders.” “Careful management and verification of diversion amounts according to their existing decrees may increase flows. Recent DWR efforts to more precisely manage diversions on the watermaster stems have produced higher prolonged instream flows in the summer season. Watermaster also are able to manage volunteered or dedicated instream flows”

“Short term: As an interim measure a

It is apparent that water rights that are used for salmon are ignored, while water rights for upstream agriculture is not managed properly. Any watershed wide permitting process needs to deal with water management. The ITP must mitigate the loss of salmon due to lack of water and must finally regulate some instream flows. The ignore this issue will open the ITP to possible litigation or lead to the opening of the Scott River adjudication.

The Shasta and Scott Pilot Program chapter of the Coho Salmon Recovery Strategy goes on to talk about the need of water management for many pages, however none of these issues or solutions are addressed in the ITP. Some of these issues and solutions that would cover the mitigation responsibilities of CEQA are: the developing of the Dry Year Water Plan (this needs to be done before an ITP is issued), add additional oversight on water use (this should be done by a agency or third party), start voluntary slow measurements of non-watermaster areas, approach those with unused water rights and ask them to add to instream flows and oversee to make sure water remains, develop creative water management techniques to benefit Coho salmon, develop plan to predict flows and manage accordingly, develop a flow study that deals with flows and habitat

Water Quality needs to be addressed

Fish and Game Code 5937 ignored, as is many other applicable laws

Fish and Game Code 5937 provides that dam operators and irrigators must allow sufficient water to pass the facilities to maintain fish habitat below the dam/diversion “in good condition. As mentioned before the flow needs of Coho, though a large focus of the recovery plan, are not mentioned in this document beyond the purpose and need statement. Numerous articles and documents mention the policy of Fish and Game ignoring 5937 in the Shasta and Scott Valleys, as a factor in salmon decline. This is only one of the many laws that this current ITP proposal chooses to ignore.

The limited scoping documents ignores all scientific controversy and documentation, but instead chooses the unsupported status quo.

An emergency water plan does not mean the same as depleting ground water at will

Money to implementation the ITP and MSAA are already provided, activities are planned, and the draft is completed before scoping has begun, which makes a mockery of the CEQA process.

Measures to avoid, minimize and mitigation referenced but not provided

“ The MSAA, which is currently in draft form, will identify activities that it will cover, referred to in the MSAA as “Covered Activities.” The MSAA also will include mitigation measures necessary to protect fish and wildlife activities that any of the Covered Activities could substantially adversely effect.”

Sub-permitting must be subject to CEQA

A recent decision in the Joy Road case stated that the California Department of Forestry could alter THP’s without going through CEQA. Therefore all sub-permitting that is not covered in the initial ITP and MSAA need to go through the CEQA process. This is especially important when looking into cumulative impacts of the covered activities. For instance both moving cows across watersheds and in-stream use of heavy equipment to built push up dams for diversions are covered activities. However how many cows and how much instream work and the impacts of both are key issues that ass to the decline of salmon.

To allow these sort of watershed-impairing activities without quantifying how much will not be allowed, nor having provisions for additional sub-permittees or additional CEQA would make a mockery of the CESA and CEQA.

The mission of the RCD does is not to protect Endangered or Threatened Species and the RCD is made up the irrigators it is supposed to regulate

The Mission of the Scott River RCD is “to recognize, identify, and meet conservation and restoration needs through voluntary landowner/manager and resource user participation by providing technical, financial, and educational leadership within the bounds of SQRCD”.

While it may be appropriate for the Scott River RCD to help write the take permits for their restoration and voluntary participation activities, nothing in the mission mentions to goal of recovering Coho Salmon, nor enforcing the laws of the state of California. Nor should they be asked to, as it is the job of the Department of Fish and Game, and it is a unacceptable conflict of interested as the RCD’s in the Shasta and Scott are largely make up of irrigators that will be subject to the ITP and MSAA agreement. Furthermore the RCD’s are appointed by Siskiyou County, which regularly speaks up against regulation for Salmon, the agencies that protect them, and citizens that are dependant on them.

While we very much appreciate the work of the RCD in regards to restoring the Scott River, the fact remains that there is less water for salmon and less salmon now then at

their conception, This proves that it is law enforcement, not only voluntary restoration in conjunction with harmful activities that is needs to keep Coho from going extinct in the Scott Valley.

This enforcement, and all monitoring, needs to be the responsibility of the CFG and other agencies that are representing the public and not the irrigators themselves. This is not fair to any party.

The RCD is the Scott and Scott has regularly shown their unwillingness to regulate, or be regulated. Testimony from the RCDs and Siskiyou County during the state listing petitions make it clear that the county and RCDs do not believe in, or support the ESA, or any law that restricts use of private land, or any water. The RCD's logs thousands of hours in the field investigating take and participate in meetings over take, yet not once have they filled a complaint or started an investigation. Within this time numerous stranding and take has occurred.

Quotes about monitoring from the Recovery Strategy

"Any monitoring program must be able to evaluate conditions at various scales and allow those involved (i.e., State and Federal agencies, counties, watershed organizations, landowners) to participate. In addition, the monitoring itself and the results and information generated must be defensible both scientifically and legally and must be acceptable to the counties and local communities where Coho salmon occur. This will require good data on the distribution, abundance, and population health of Coho salmon throughout California. A significant monitoring effort sustained over several decades will be required."

Baseline used is not the natural baseline: Conditions of watershed pre-agriculture and impacts of agriculture cumulatively is not addressed

"CDFG has determined the physical environmental conditions in the Program Area as the existed at the time SQRCD submitted its application for an OTP and MSAA notification constitute the baseline physical condition by which a determination will be made as to whether an impact is significant. For the purpose of the EIR, these conditions include legal agriculture operations, including legal water diversions, which were occurring in the Program area at the time"

This accretion is that the baseline is what was happening at the time of application is arbitrary and capricious, as is many of the similar un-scientific assertions. The baseline should the conditions pre-agriculture in the valley and should include what the Coho salmon needs. By following this logical the DFG is asserting that the baselines are rivers that are de-watered much of the year, are suffering from impoundments, and have had their natural course bulldozed out of them, and has cows grazing in it. Does this also mean that a population of Coho salmon that is so low that it is facing extinction, is also the baseline that we should strive for?

Avoidance and minimization requirements are ignored, and mitigation and BMPs are unspecified.

The ITP not only ignores all requirements for minimization and avoidance, but also only promised to make plans for mitigation. Some of these plans are called for in the “Shasta and Scott Pilot Project”, of the Coho Salmon Recovery Strategy, yet many are not included. Most of these studies and plans have yet to be accomplished, yet the promise of mitigation plans and studies are expected to be acceptable mitigation under CEQA. However planning to mitigation harmful actions at a later time, after ignoring minimization and avoidance is not an acceptable mitigation under CEQA. CEQA puts much onus on mitigation and this mitigation needed to be spelled out, include a time, and include science that supports that his mitigation is appropriate. For instance, if riparian fencing were considered mitigation for low flows this would be inappropriate. However no list of mitigations that will actually happen, and the analysis of these mitigation is provided. Furthermore many of the areas that are to be mitigation, such as the critical parts of the watersheds where water efficacy improve projects are needed, are even specified despite a wealth of science knowledge in this area, and criteria is not disclosed either.

Fish decease, and factors that lead to fish deceases not discussed in ITP, and neither is juvenile fish kills

Fish decease and parasites, which are thought to be caused by water quality problems are not analyzed, or even mentioned in the Environmental Checklist. These deceases are the major factor in the killing all salmonids in the Klamath River, and are though to be present in up to 90% of the juvenile salmon in the Klamath River. Are these deceases not present in the Scott River? Are the Coho that come from the Klamath not infected any longer when they make it into the tributaries? Are the conditions that cause these deceases not present in the Scott?

Fish decease is now subject to numerous scientific reports on the Klamath, and an investigation as part of the Klamath TMDL by the Regional Water Quality Control Board. It is widely believed to be responsible for the 2002 fish kill of over 68,000 salmon (including some Coho) in the Klamath River. A fish decease investigations and a cumulative affects analysis should be included in this ITP.

Covered Activities 2: Water Diversion Structures.

The requirement to minimize and avoid activities that take Coho Salmon should include ending the practice of building Gravel push up dams. This is an unnecessary activity that impact salmon populations past the point of mitigation. The full impacts and cumulative of these activities, and necessary in-stream heavily equipment works needs to be addressed in the EIR. The impacts of this activity are great. First it greatly adds to sediment production in a sediment-impaired watershed, second these the building of their structures impacts the natural gravel recruiting process and compacts the streambed. In many situations these structures block salmon, which leads to too many salmon in one pool, and thus fish decease and kills. We are opposed to the continuing bulldozing of the Scott River and tributaries to allow this harmful practice. While we also so not approve of flashboard dams and other temporary structures and feel they need to be avoided and

minimized, in may be possible to mitigation for some of these structures, if passage in both directions and for all age classes occur. This is not so with gravel push up dams.

Additionally the building and maintenance of pumps and sump ponds within in Scott River and tributaries channel will have huge impact on the cumulative impacts to the Scott River and to water quality of the impaired waters of the Shasta.

Whether these activities, that are, to be covered in the ITP and MSAA will violate the Clean Water Act and Porter Cologne Act and the Endangered Species Act needs to be discussed in the EIR.

This is also true with covered activity 4: Construction and Maintenance of Stream Access and Crossings and Covered Activity 10: Livestock Grazing.

Currently the ITP illegally suggest allowing Covered activities 2,4, and 10, which include in-stream and streamside grazing, heavy equipment use, damming of the river, without any provisions to avoid or minimize or frankly mitigate these illegal activities.

Mitigation should include the return of the River to its natural course. Both the Shasta River and Scott River have been channelized to provide for agriculture and then widened and compacted by continual grazing, bulldozing and bad land management. The return of the rivers to their natural course and the return of floodplains, which is what made these rivers Coho Rivers in the first place, need to be explored and used when possible.

If the rivers should re-contour themselves, the use of heavy equipment to re channelize the river should not be allowed unless the river is threatening the homes of valley residents.

Effectiveness should be reviewed by agencies often

The only tool for review presented in the Environmental Checklist is the statement that the irrigators thought the RCDs will be monitoring and enforcing the ITP and MSAA themselves. Either the CFG or a third party monitor paid by the state should be reviewing and monitoring these permits, and all Fish and Game Codes and all laws need to be enforced by Fish and Game. Furthermore this ITP should be reviewed yearly, not be the RCDs, but by the CFG, and provisions to protect Salmon should be added is expected take is exceeded or restoration and mitigation measures be proven ineffective.

All factors in the Elements Necessary for Recovery Section of the Recovery Plan should be used when AVIODING, MINIMIZING, AND MITIGATION agriculture permitting.

Some of these are below

- I. HYDRODYNAMICS AND SEDIMENT TRANSPORT
- II. SYSTEM PRODUCTIVITY

A. PRIMARY PRODUCTIVITY B. INVERTEBRATE C. FISH D. NUTRIENT CYCLING

III. FLUVIAL GEOMORPHOLOGY

A. SEDIMENT (embeddedness, suspended)

B. TURBIDITY

C. SUBSTRATE PARTICLE SIZE

D. LWD CYCLING

E. LAND SLIDING AND DEBRIS FLOW

IV. HYDROLOGY A. FLOW (rate, timing, quantity)

B. TEMPERATURE C. OTHER WATER QUALITY (i.e., DO)

V. ECOLOGICAL COMMUNITIES

A. RIPARIAN COMMUNITY

1. Vegetation composition

2. Invertebrate composition

3. Vegetation condition

4. LWD recruitment

B. NEARSHORE OCEAN CONDITION

C. ESTUARINE

1. Condition 2. Fish use

VI. WATER USE

A. EFFICIENCY

B. TRANSFER

C. STORAGE

VII. LAND USE A. EFFECTS ON HABITAT

B. EFFECTS ON FISH

C. LAND USE CHANGE TRAJECTORIES

D. ECONOMIC CONSIDERATIONS

1. Land use and owners

2. Local jurisdictions

VIII. FISHING

IX. BARRIERS TO MIGRATION

X. FISH POPULATION

A. RANGE

B. DISTRIBUTION

C. COHORT REPLACEMENT

D. ABUNDANCE

E. FISH HEALTH

XI. RECOVERY EFFORTS

A. IMPLEMENTATION B. EFFECTIVENESS

C. VALIDITY (fish response)

The ITP covers, provided as mitigation, and supplies money for actions that are needed to comply with laws, and couples them with activities that are against the law.

Many of the restoration actions in the Environmental Checklist are necessary under law. However they are covered with actions that are against the law, which defies logic. Many of these activities have already begun and are funded because they are necessary under the law. Subjecting these activities to CEQA with activities with like allowing cows and heavy equipment in a waterway, which is the opposite of what is legal, and the opposite is happening under the restoration activities does two things:

1. It makes activities that must happen under law subject to litigation along with those things that are illegal
2. Makes the restoration activities illegal to proceed with until the CEQA process is over.

Some of the laws discussed are below

Water Pollution, Fish & Game Code §5650. Prohibits anyone from depositing in, permitting to pass into, or placing where it can pass into the waters of the State, specified items and “any substance or material deleterious to fish, plant life, or bird life,” except a discharge or release expressly authorized by and in compliance with a WAR or waiver or in compliance with a Federal permit issued a water quality certification issued by the State Water Resources Control Board or regional board after public hearing. Commission Regulations,

Fish & Game Code §316.5. Authorizes Commission to “prohibit the taking or possessing of salmon in the same manner as the taking or possessing of salmon is prohibited by Federal law or by rules or regulations adopted by the United States Secretary of Commerce, notwithstanding any other provision of this code.”

Examination of Dams, Fish & Game Code §5930. Requires the Department, from time to time, to examine all dams in all rivers and streams in the State naturally frequented by fish.

Fishways, Fish & Game Code §5931. Provides that if, in the opinion of the Commission, there is not free passage for fish over and around any dam, the Department shall cause to be furnished suitable fishway plans and order the owner in writing to provide the dam, which shall be completed to the Department’s satisfaction.

Additional Fishways, Fish & Game Code §5932. Requires that when article 2(dams and structures) has been complied with, if in the opinion of the Commission changed conditions make additional structures desirable for free passage of fish, the Department may make such additional structures and necessary expenditures.

Dam Construction and Enlargement, Fish & Game Code §5933. Requires the Commission to be given a copy of any application to DWR for new dam or enlargement of dam. If the Commission deems fishway necessary for preservation and protection of fish and construction and operation of fishway is practicable, it shall set a date for hearing. Where the Commission finds after hearing fishway is necessary and practicable, prohibits construction without prior written approval of Commission. Fishway Maintenance,

Fish & Game Code §5935. Requires owner of any dam upon which a fishway has been provided shall keep the fishway in repair and free from obstructions to passage of fish at all times.

Fish Passage, Fish & Game Code §5937. Requires owner of any dam to allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around, or through the dam, to keep in good condition any fish that may be planted or exist below the dam.

Fish & Game Code §2105et seq. Sets forth requirements for Recovery Strategy. Sets forth criteria for Commission approval of Recovery Strategy. Authorizes inclusion of guidelines for issuance of memoranda of understanding under

FGC §2081. Provides that the Recovery Strategy itself shall have no regulatory significance, shall not be considered to be a regulation for any purpose, and is not a regulatory action or document. Fully Protected Species,

Fish & Game Code §3511, 4700, 5050, 5515. Prohibits take and possession of specified fully protected species, except collecting for “necessary scientific research” as authorized by the Commission. No provision of the FGC or any other provision of law shall be construed to authorize the issuance of permits or licenses to take any fully protected species.

California Endangered Species Act (CESA), Fish & Game Code §2080et seq. Prohibits take of California-listed and candidate species, except as otherwise authorized. Natural Community Conservation Planning Act,

Fish & Game Code §2080et seq. Authorizes take of any species whose conservation and management is provided for in an approved natural community conservation plan.

Lake and Streambed Alteration Protection, Fish & Game Code §1600et seq. Prohibits any person from substantially diverting or obstructing the natural flow, or substantially changing the bed, bank, or channel of any river, stream or lake without first notifying the Department of the activity. Prohibits a person from commencing any activity until:

1. The Department has found that it will not substantially adversely affect existing fish and wildlife resources; or

2. The Department’s proposals as to measures necessary to protect fish and wildlife resources (as agreed to), or the decision of a panel of arbitrators, have been incorporated into the activity. Where the Department has found the activity will substantially adversely affect existing fish and wildlife resources, prohibits any person from engaging in the activity unless it is conducted in accordance with the department’s proposals (as agreed to) or the decisions of the panel of arbitrators.

The Department shall not condition a streambed alteration agreement on the receipt of another State or Federal permit

Screening Diversions Deleterious to Salmon and Steelhead, Fish & Game Code §6100.

Requires dam owners to screen any new diversion of water from any stream having populations of salmon and steelhead which is determined by the Department to be deleterious to salmon and steelhead. Authorizes the Department to make onsite investigation prior to proposing measures necessary to protect fishlife. Prohibits commencement of diversion until the Department has determined the protective measures have been incorporated into plans and construction of diversion.

In Closing

In closing we feel this ITP being up for public comment without it being available to the public is pre-mature, and Fish and Game and the RCD should use the recovery plan and best available science to make sure that the ITPs and MSAA are legal and are based on the best available science. Tribes, the downriver public, fishermen, scientist and other agencies should be involved in this process, and at the time an inclusive science based ITP is formed that public should be provided with it to base their comments on. In this process beneficial (and required) activities should be separated into two ITP's, and non-irrigation take should be included or have a separate process. Currently there are very few applicable laws this proposal does not conflict with and these permit may very well lead to localized extinction of Coho salmon.

Thank you,

Regina Chichizola
Klamath Riverkeeper
P.O. Box 21
Orleans, CA 95556

George Sexton
Conservation Director
Klamath Siskiyou Wildlands Center
PO Box 102
Ashland, OR 97520

Zeke Grader
Pacific Coast Federation of Fishermen's Associations (PCFFA)
PO Box 11170, Eugene, OR 97440-3370

North Coast Consumer's Alliance
P.O. Box 351
Redwood Valley, CA 95470

To: Bob Williams
Staff Environmental Scientist
Conservation Planning, CDFG
601 Locust St.
Redding, CA 96001
FAX: 530 225-2381

Re: Notice of Preparation of a Draft Environmental Impact Report, Shasta River
Watershed-wide Permitting Program.

Dear Mr. Williams,

Thanks for taking a special effort to provide me with the two NOP's on the Shasta and Scott Rivers and for allowing me time to study the documents and to respond. It is very much appreciated.

The covered activities permitted through the watershed-wide program have not been sufficiently described in scope, number or intensity of streambed disruption. New diversions? It doesn't exclude them.

Under the Program, heavy equipment may operate in the streambed every day of every summer for ten years. This is an unacceptable amount of streambed disturbance.

Permitting new wells for stock watering without doing a thorough groundwater/surface water relationship study is unacceptable. Agricultural activity can be economically sustainable over time if it is environmentally sustainable. If you don't know how much water is in the aquifer and if you don't know how that quantity relates to river flow, how can you tell what level of water extraction is sustainable? High temperature/low flow conditions might give you a clue, however, that too much water is being diverted. The NOP considers this condition as merely an opportunity get heavy equipment into the streambed, possibly to create new diversions. This is not acceptable.

Grazing of livestock in the streambed will become a permitted activity, approved by the CDFG. Not acceptable.

The Program will permit the current amount of tailwater returns for several years. Not acceptable.

The Program will allow the continued entraining of fish into the fields for fertilizer for too long. Not acceptable.

The timetable for changing to more fish-friendly diversion techniques and for reducing tailwater returns is so slow that it almost guarantees the demise of the coho.

The hopefully beneficial actions outlined in the NOPs for both the Shasta and the Scott (opening up fish passage barriers, dam removal etc.) have not been adequately described. Each project may require its own EIR to comply with CEQA. Without such, the public may be locked out of the information needed to respond. This Program is already illegal in that it authorizes continued activities that harm Coho. It will be doubly illegal if it thwarts CEQA.

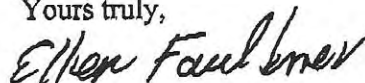
The uncorrected over-extraction of water from the tributaries and continued pollution by animal wastes have contributed to the diminished carrying capacity of the Klamath, which in turn has shut down the commercial salmon fishing industry along the North Coast. The closures are due to concerns about the "weakest stock." The coho in the Shasta and the Chinook in the Klamath are designated as weakest stock. While the CDFG Program is permitting take of Coho in the Shasta and adversely impacting the Chinook, the PFMC is shutting down the commercial salmon fishery due to this take. Any EIR must be widened to include a discussion of this unfortunate set of regulations. Scoping sessions must be conducted near the fishing communities along the coast that are the most deeply impacted economically.

In summary, the Program institutionalizes the horrendous management practices that got the Shasta in the sorry condition it is now. It is a prescription for ongoing mismanagement for the next ten years. In order to comply with CEQA, alternatives must be considered. Instead of twisting CESA and section 1602 to comply with the current mismanagement:

- Give the ag interests a disincentive to continue entraining fish into the fields for fertilizer. Fine them heavily. Stop unscreened diversions now!
- Give them a similar disincentive for creating tailwater returns. Fine them. Let the new regulations stop tailwater returns NOW not ten years from now.
- No new water diversions!
- Encourage the NCWQCB to use its power to cut back on the water rights of the most egregious water wasters.
- Get tough! Use whatever enforcement powers you have to trim the beef industry of wasteful and destructive practices and of unsustainable overproduction.

There is a built-in incentive for producing sustainably farmed beef. The public will pay more for it.

Yours truly,



Ellen Faulkner

Bob Williams
Staff Environmental Scientist
Department of Fish and Game
601 Locust Street
Redding, California 96001
October 29, 2006

Re: Scott and Shasta Incidental Take Permits for Coho Salmon; Scoping Comments

Dear Mr. Williams,

The Draft Take Permit should be released for review by downstream affected interests. Involvement of downstream fishing communities, tribal governments, Counties, and the public is essential to developing a plan that will achieve recovery goals for listed coho salmon. The Coastal Commission also has an interest, and should be included in the development of the ITP. Agreements between State and Federal agencies for fisheries protections and public funding must also be considered.

Water pollution problems in the Scott and Shasta Rivers are exacerbated by low and no-flow conditions in the rivers and their tributaries at times of year crucial to coho survival. The Draft ITP Applications for the Scott and Shasta Rivers do not contain a goal of achieving minimum flow requirements for coho salmon. Buying water each year from willing sellers does

not provide for flows in dry years. Long-term solutions must be found to provide the needed water flows, such as permanent transfer of water dedicated for fish. Since coho salmon live in fresh water for a year before migrating to the ocean, year-round cold water must be provided for them in order to begin recovery.

Dwinnell Dam must be addressed for its contribution to temperature and low dissolved oxygen pollution in the Shasta River, and also because it blocks access to significant spawning habitat upstream. Dwinnell Dam is currently in violation of state laws requiring flow releases. It does not provide any electricity generation.

Cold, oxygen-rich water would also contribute to the ocean fishery for chinook, which is limited in good years by restrictions on coho. The Klamath river system is essential to a viable commercial fishery in the ocean, and hearings should be held in coastal communities. Fishing economies of cities from as far away as Morro Bay in Southern Central California to ports in Northern Oregon are severely affected by the health of fisheries in the Scott and Shasta Rivers. Ninety percent of California ocean commercial salmon permits have been dropped in the last twenty years, largely due to area closures to protect Klamath River fish stocks. Fishing closures began 27 years ago, in 1979, for Klamath stocks, only to have habitat continually degraded in the river. The 2006 ocean season was the most restrictive in history. Scott and Shasta Rivers are major tributaries, and should be producing healthy fish runs. Instead, the rivers are dewatered for months in some years, leading to fish kills and late spawning.

Groundwater pumping must be fully mitigated in order to allow an exemption for groundwater pumping. Much of the agricultural diversion from the Scott River is from wells connected to the river; this must be addressed in the ITP. Compliance with provisions of the ITP must be monitored and enforced by other than irrigators affected by the requirements, who serve on the Resource Conservation District. The RCD has a history of publicly opposing any regulation of their water-use activities, and is not likely to be effective in protecting the interests of the fish. The Department of Fish and Game, whose officials are sworn to uphold laws that prevent dewatering of the rivers, also have a twenty-year history of not enforcing Fish and Game laws related to minimum flows needed for salmonids in the Scott and Shasta Rivers.

The California Endangered Species Act (CESA) and CEQA require specific actions with timelines for recovery of threatened coho salmon. The California Recovery Strategy for coho salmon contains six goals for recovering coho salmon populations, and before de-listing can be achieved:

- Maintain and improve the number of key populations and increase the number of populations and cohorts of Coho salmon.
- Maintain and increase the number of spawning adults.
- Maintain the range, and maintain and increase distribution of Coho salmon.
- Maintain existing habitat essential for Coho salmon.
- Enhance and restore habitat within the range of Coho salmon.
- Reach and maintain Coho salmon population levels to allow for the resumption of Tribal, recreational, and commercial fisheries for Coho salmon.

The de-listing goals should be met before irrigators are exempted for “take.”

Minimizing “take” at diversions is a good idea, and a legal requirement with which irrigators have been out of compliance for years. California’s Fisheries Restoration Program maintains public confidence in the distribution of public moneys for restoration by requiring that the funds not be used for compliance with existing laws. Preliminary documents of the ITP suggest the intention is to pay for regulatory compliance with public money, reducing opportunities for other effective projects not already required of the landowner. In fact, a large part of ten million dollars of restoration money was recently directed through CDFG to do just that, ostensibly to buy cooperation with the ITP from landowners. Involving a larger body of the interested public would open the process to considering the benefit of all parties, instead of re-creating a 1950’s style “smoke-filled rooms,” back-scratching situation of mutual self-interest.

Fencing out cattle and planting riparian vegetation will not be effective without cold water flows at critical times for juvenile and adult salmon. Coho salmon populations will not recover without water. Stranding of fish when portions of the stream are dewatered is a direct “take,” illegal before CESA listing, but historically un-enforced in the Scott and Shasta Valleys. But stressful and lethal hot water temperatures for fish when they cannot access cold water refuges must also be mitigated for the agricultural exemptions to be mitigated. Acquisition of

sources of cold water from springs and enforcement of existing laws such as 5937 would help. Side-channels and backwaters can be good refuges for juvenile fish—very effective examples have been created on the Mattole River. The California Environmental Quality Act, CEQA, requires full mitigation before take can be permitted.

CDFG should fulfill its obligations as an agent of the State of California to benefit all the people of the state, including all interested parties in development of an effective recovery for threatened coho populations that belong to all of us before taking part in any agreements that will further divide communities in the Klamath Basin. All legal obligations to protect and restore threatened coho populations must be met before irrigators are exempted for “take.”

Vivian Helliwell
Pacific Coast Federation of Fishermen's Associations
P.O. Box 307
Eureka, CA 95502

The public is invited to provide comment or concerns related
to the Shasta River/Scott River Watershed Project.

Name: Gary Black

Address: 5916 Eastside Rd

City, State, Zip: Etna CA 96027

Telephone: 530 487-7472

E-mail: gblack@Sisqtel.net

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDFC)
601 Locust Street
Redding, CA 96001

(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT: Shn Monke made comment about specific issues being
considered. His example is not specific but has not been
addressed. There are numerous flumes that cross
streams which require maintenance, repair, and replacement
In sections that cover diversions & diversion
structures, flumes or construction of alternatives
may need to be included as a ~~state~~ standard.

Thank you for your participation!

Scott Scoping meeting
10/25/06

The public is invited to provide comment or concerns
related to the Shasta River Watershed Project.

Name: Jack Cowley

Address: 7335 Ball mtn Rd

City, State, Zip: Montague Calif 96064

Telephone: 530 459 5506

E-mail: _____

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDEG)
601 Locust Street
Redding, CA 96001

(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT: The program has become to complex, time
consuming & Expense.

The Fish & game state they are following the will of the
people, therefore the people (state) should pay all the
costs. The burden should not be shouldered by the landowners.
The loss of water for irrigation will forever destroy
sustainable Agriculture in Shasta Valley.

The only alternative is to destroy Shasta Valley as a
pristine area of Calif. Forever!

RCDs are Voluntary thus too much of a burden is placed on
Volunteers.

Thank you for your participation!

Monique

D-WIDE PERMITTING PROGRAMS
VIRONMENTAL IMPACT REPORTS

The public is invited to participate
to the Shasta River/Scott River Watershed Project.

Name: Monique Dixon
Address: 60814 E. Callahan Rd
City, State, Zip: Callahan CA 96014
Telephone: 530-410-2054
E-mail: auntnigue@hotmail.com

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

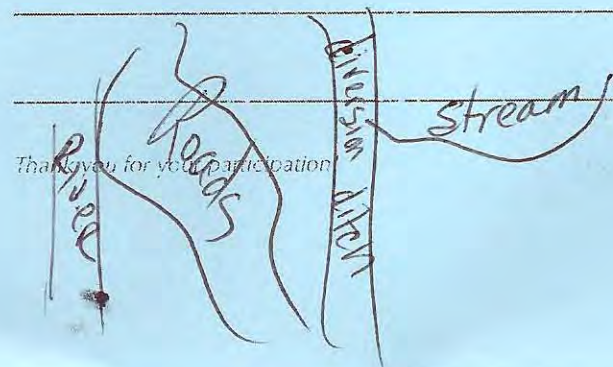
(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT: RE: MSAA

Have you considered those streams
that may not have access to the
river because of blockage, but the
water does flow through diversions &
eventually end up back in the river.

I realize you aren't considering
upstream issues, but the MSAA should
be applicable to all streams in
the watershed.



Thank you for your participation

Shasta River Program
Survey meeting 10/25/06

Margaret Draper / Attorney at Law / POB 176 / Bayside / CA 95524

2006 NOV 14 PM 1 29
DFG - RECORDING
RECEIVED

November 13, 2006

Bob Williams
Staff Environmental Scientist
Dept. of Fish and Game
601 Locust St.
Redding, CA 96001

Re: TMDL / ITP Shasta and Scott Rivers

Dear Mr. Williams:

I am writing with regard to the Shasta and Scott rivers – significant tributaries to the beleaguered Klamath system. As a prior Shasta Valley Resource Conservation District Director, I can attest to the fact that much was known 20 years ago regarding the high contributions of heat and silt pollution from those two rivers to the Klamath River. Additionally, all the dire events warned of at the time, by tribal groups, independent scientists, fishermen and conservation groups (among others), regarding the viability of downstream fish populations have, sadly, come to pass. Mere warnings have done little to motivate change sufficient to improve fish survival.

The current science on the subject does not appear to show any improvement in the way that landowners and agencies have cooperated to solve the problems of temperature/oxygen content and siltation – let alone chemical pollution. If the “proof is in the pudding,” the progress report is dismal.

While I am sympathetic to the needs of landowners and agriculture, destruction of riparian habitat, diversion, and other pollution problems can, and should, be mitigated. Without strict TMDLs this will not occur. Landowners, where pocketbooks are slim, need assistance from agencies to address proper goals – it is an investment government can and should make. Assistance to landowners should not come in the form of easing restrictions, but rather in enabling them to participate in improving water quality. Allowing excessive incidental take permits is not the road public policy should follow in the face of fishery extinction and severe compromising of the Public Trust with regard to the state's waters.

I understand that the North Coast Regional Water Quality Control Board (NCRWQCB) approved the Shasta TMDL on June 29, 2006 and it will be considered for adoption before the State Water Resources Control Board (SWRCB) on November 15, 2006. The Boards website refers to TMDLs as a

'pollution budget' designed to restore the health of a polluted body of water.
The TMDL process provides a quantitative assessment of water quality

problems, contributing sources of pollution, and the pollutant load reductions or control actions needed to restore and protect the beneficial uses of an individual waterbody impaired from loading of a particular pollutant...

In *Pronsolino et al. vs. Nastri et al* (2002) at pp 9 et seq.), the U.S. Court of Appeals Ninth Circuit provides great insight into the role of TMDLs:

(The TMDL)... shall be established at a level necessary to implement the applicable water quality standards... Section 303(d)(1)(C)...TMDLs serve as a link in an implementation chain that includes federally regulated point source controls, state or local plans for point and nonpoint source pollution reductions, and assessment of the impact of such measures on water quality, all to the end of attaining water quality goals for the nations waters.

The Clean Water Act thus provides an opportunity to employ TMDLs productively to protect water quality for sensitive and endangered fish species – but only if they are meaningfully applied. Your responsibility is to use the best available science – including use of prior studies and findings – to establish such loads.

In my opinion, the Shasta TMDL model should have included pH because pH values have exceeded Basin Plan objectives for years and are high enough to stress salmonids. This has been known for some time and there is no reason to omit it from the model. It is inconceivable to me that *all* forms of nitrogen were not properly measured and modeled. This has been a significant known problem in the system for decades!

Flood siltation from Parks Creek was an issue raised within the Shasta Valley RCD in the early 80s. I remember letters in the file, written to and probably by the Shasta Valley Resource Conservation District. The fact that such loading was not included in the model is a gross oversight.

While the Shasta TMDL does acknowledge that Dwinell Reservoir is a major contributor to Shasta River problems, there is no mention of considering dam removal. Given the current status of dam removal, it should be on the table for consideration when it comes to water quality protection.

With regard to the Scott River, the TMDLs also appear less than useful. Vague monitoring measures proposed may well lead to extinction for fisheries, because adaptive management is impossible without sufficient information as conditions change – likely worsen. Decisions regarding Waste Discharge Requirement permits depend on good monitoring.

Assigning groundwater and flow studies to the Siskiyou County, rather than a less biased and less financially challenged office like the SWRCB, almost guarantees such studies will be skewed or incomplete. I speak from experience, having lived and worked in Siskiyou County for more than a decade.

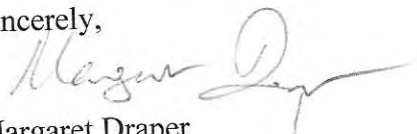
It is again most surprising that the extinction risk of Coho Salmon populations in the basin are not emphasized or noted, and that the decline in the Scotts fall Chinook run is not addressed. Some sort of interim plan to protect these species short term needs inclusion.

Not only is a healthy fish population a good measure of good water quality in itself, but a wonderful benefit. Significantly, the potential importance of the fishery economy has been estimated to exceed the economic value of timber in Northern California since the early 1980s. Certainly, Tribal communities and the public need a healthy fishery.

One of the great frustrations of trying to protect anadromous fish populations in prior years was the fact that the Clean Water Act was not being enforced with regard to non-point source pollution. Now that the Act has been ruled to include such pollution since 2002, agencies and scientists should be actively pursuing goals and standards that actually make a difference in water quality. If "TMDLs serve as a link in an implementation chain," as the court noted above, it is your obligation to improve standards so California can actually ameliorate quality in the Klamath Basin, instead of continuing the frustrating charade that has taken place in the course of my lifetime.

Thanks for your attention to these comments, which I ask be incorporated into the public record at your agency.

Sincerely,

A handwritten signature in cursive script, appearing to read "Margaret Draper", written in dark ink.

Margaret Draper

Cc to: Donald Koch

Dean Estep
P. O. Box 2179
Ft. Bragg, Ca., 95437
707 - 964 - 3700

Bob Williams
Department of Fish and Game
601 Locust Street
Redding, Ca. 96001

re: Scott and Shaster River Watershed ITP and Master, Streambed Alteration...

Dear Mr. Williams:

I, would start by saying that I, strongly oppose this master streambed alteration. This agreement is so vague how can there be a honest E.I.R., how could this be in compliance with CEQA.

To suggest incidental take permits and more water diversions is outrages.

The sub-permittee must submit plans to CDFG for review and approval. How can this be in compliance with (CEQA)?

It sounds like you sign and we'll fill in the blanks later. "NO THANK-YOU"

The Shasta and the Scott are part of the Klamath watershed. Which has been used to destroy the commercial salmon industry.

The flow in the Shasta is already to low, with temperatures that are lethal to salmon. I see nothing in your report about chinook salmon, does this mean you don't need a I.T.P. to kill them?

It sounds like you are trying to under mine what the north regional water board is doing.

The idea of bulldozers, backhoes and other heavy equipment in and around the Scott and the Shasta Rivers at any time of the year is adding more degradation to the already troubled Klamath River.!!

If you would like pictures to show the impact this has had on Fort Bragg and the commercial salmon fishermen?

I, would be happy to send them. They just ground up 2 more salmon boats and hauled them off in large dumpsters to hazard waste dumps.!!

Sincerely,
Dean Estep
Commercial Salmon Fisherman:



The public is invited to provide comment or concerns related
to the Shasta River/Scott River Watershed Project.

Name: Don Gutleben

Address: _____

City, State, Zip: _____

Telephone: _____

E-mail: _____

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT: The fish are going through the screens
& getting stuck - they can't get back
through. They are living in the ditch & not
going back through. Actually those
JUNK fish are Trout!

The "junk fish" are still a valuable
food source for other species of animals.

Thank you for your participation!

Scott River Program - Workshop
10/25/06

The public is invited to provide comment or concerns
related to the Shasta River Watershed Project.

Name: Justin Ly

Address: _____

City, State, Zip: _____

Telephone: _____

E-mail: justin.ly@ca.usda.gov

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT: Pg. 7 of Initial Study - water diversion is covered
if ag operator uses water for domestic use. Why not cover
domestic use (if there's any) regardless of whether the user is an
ag operator or not?

Pg. 36 CA red legged frog - I'm not aware of CA red-legged
frogs in our area, but it never hurts to check. Will there be surveys
done to assess/confirm, ~~not~~ and if so, what avoidance, minimization
and/or mitigation measures will be implemented?

Pg. 37 - Caho Recovery Strategy is the recovery plan so the
statement that the "Recovery Strategy is the preliminary step toward
a state recovery plan" is incorrect.

Thank you for your participation!

The public is invited to provide comment or concerns related
to the Shasta River/Scott River Watershed Project.

Name: John and Jennifer Menke
Address: 10935 Quartz Valley Rd.
City, State, Zip: Ft. Jones, CA 96032
Telephone: 530-468-5341
E-mail: none

Comments may be submitted tonight
or mailed to:

Mr. Bob Williams,
Staff Environmental Scientist

Conservation Planning (CDFG)
601 Locust Street
Redding, CA 96001

(530) 225-2365 (phone)

(530) 225-2381 (fax)

COMMENT:

Agricultural Resource and Infrastructure Protection

Two additional streambed alteration activities not included in the list of common ones (page 7, section 8.4.1 Covered Activities, in Environmental Checklist—Initial Study) need to be added and analyzed by the consulting team doing the EIR. We have both needs on our ranch in Quartz Valley. First, periodic maintenance of gravel push-up barriers to re-create a single unbraided channel is needed to counter the effect of buildups of cobble, gravel and sediment that cause Mill Creek to leave its channel, wash out our flume culvert crossing over Mill Creek, breach our irrigation delivery ditch which transports water from Shackleford Creek to the south end of our ranch, and flood the county road. Secondly, we need to do periodic maintenance of gravel push-up barriers and channel restoration at a big sweeping bend in Mill Creek to deflect the creek from flowing across our irrigated pastures. These activities are occurring in unvegetated rubble areas where stream flows aboveground typically only occur from late December until July. We were allowed to do both activities with agency on-site review but without costly permits during the dry season when no flow was occurring in Mill Creek following the 1997 unusual storm runoff event and the first activity in 2006 following a similar high flow event (2 times in 13 years with cost share assistance from FSA). Similar needs exist at other locations in Scott and Quartz Valleys. During the FSA, NRCS, RCD 2005-2006 winter flood damage tour, lack of periodic channel maintenance like the two activities addressed above contributed to extensive damage to landowners' property along Sniktaw and Kidder Creeks.

Thank you for your participation!

The public is invited to provide comment or concerns related to the Shasta River/Scott River Watershed Project.

Name: Danielle Quigley

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Comments may be submitted tonight or mailed to:

Mr. Bob Williams,
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COMMENT: This EIR should focus on currently existing areas of Key
(A) chinook habitat (Votek 2005, Quigley 2005), and identify mitigation to ensure protection of those areas. A particular concern is the use of heavy equipment instream to maintain diversions please ensure that measures are identified to keep them out of stream during Key periods (ie identified spawning period Nov 15 - Jan 15 ~~and~~ and critical low flow rearing period ~ eg when Key reaches become disconnected. If it is within the scope of the EIR, please identify best possible practices for gravel push-up dams, etc. ^{or standards}
(B) also Key areas of chinook spawning habitat

Thank you for your participation!

Scott River Program
Scoping meeting 10/25/06